

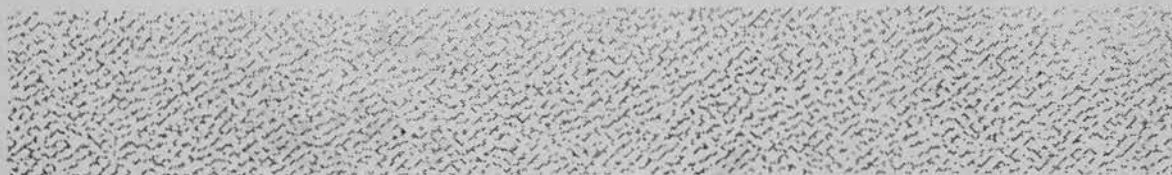
1 JULY 1965

EODS-65-3



**VIET CONG'S EXPLOSIVE
ORDNANCE**

USED IN SOUTH VIETNAM



U. S. Naval School, Explosive Ordnance Disposal

Indian Head, Maryland

Prepared by the Publications Division

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U. S. NAVAL SCHOOL, EXPLOSIVE ORDNANCE DISPOSAL
Indian Head, Maryland

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FOREWORD

The purpose of this book is to provide descriptive data to Explosive Ordnance Disposal personnel for their use in evaluating Viet Cong ordnance. The material was screened and taken from a booklet prepared by the J-2, High Command RVNAF, titled "War-Material Used by Viet Cong in South Vietnam," Handbook II and "War-Material Presumably in Service in North Vietnam," Handbook I.

The data given is translated from Vietnamese and all conversion to United State's measurements are approximate.

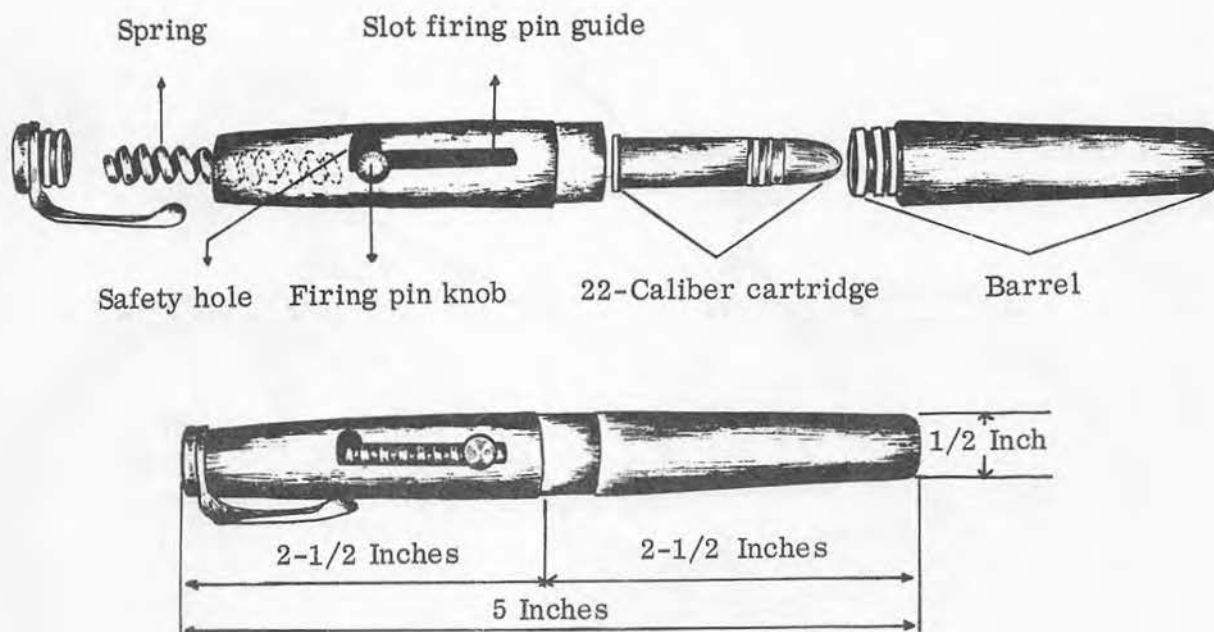
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ASSASSINATION DEVICES

FOUNTAIN PEN ASSASSINATION WEAPON



This weapon has the shape of an ordinary fountain pen with a fastening clip. A groove used for guiding the firing pin is seen on the pen cap. The bolt and firing pin are in one piece.

The pen body is made of a smooth, thin metal tube and the bore has no riflings. The weapon is employed at short range (1.5 m).

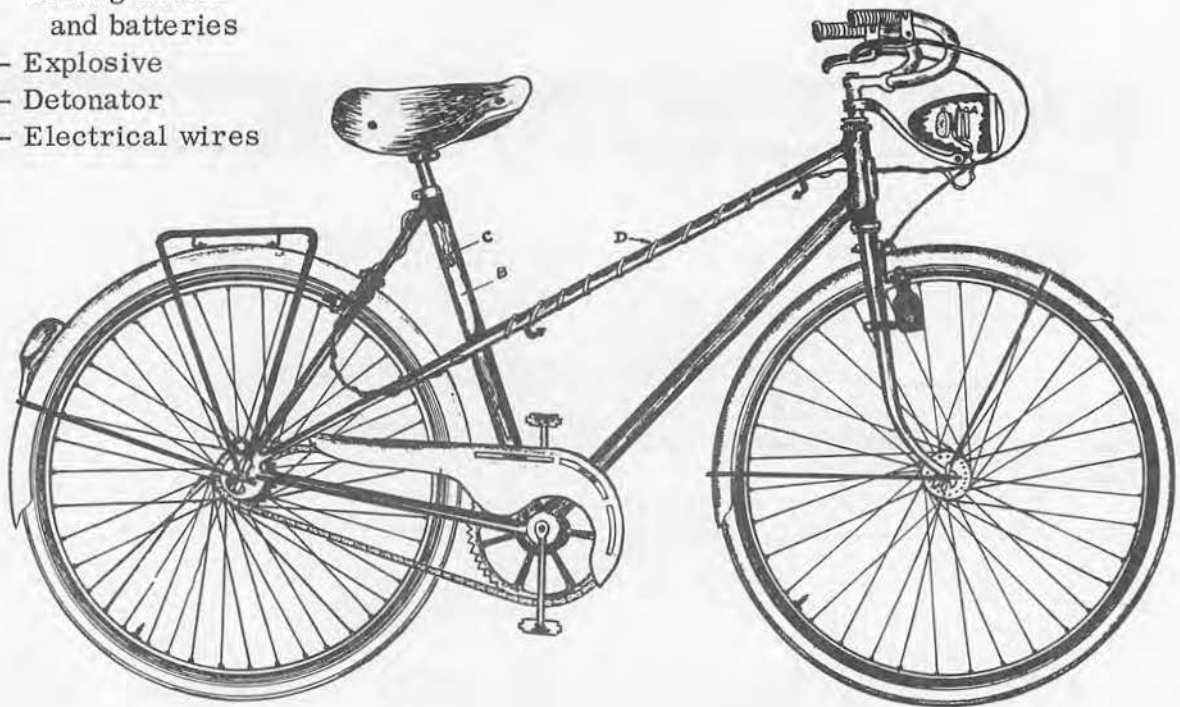
To load, remove the barrel, insert the cartridge, and replace the barrel. To cock the weapon, pull the operating handle to the rear and turn left until it engages in the safety lock. The weapon is now in the cocked position. To fire, point the weapon toward the target and turn the operating handle right. The operating handle disengages from the safety pin and pushes the firing pin forward, (by force of the spring), which strikes the primer.

Characteristics

Caliber	.22 (5.6 mm)
Over-all length	126 mm/5 in.
Length of barrel	65 mm/ 2-1/2 in.
Outside diameter of barrel	12 mm (the largest part) /0.47 in.
Maximum effective range	1.5 m/5 ft

BICYCLE MINE

- A - Timing device
and batteries
- B - Explosive
- C - Detonator
- D - Electrical wires



This mine is fired electrically by means of a wrist watch delay firing device.

Body: The main charge and detonator are introduced into a tube of the bicycle frame under the saddle, and an electric wire is extended outside the frame.

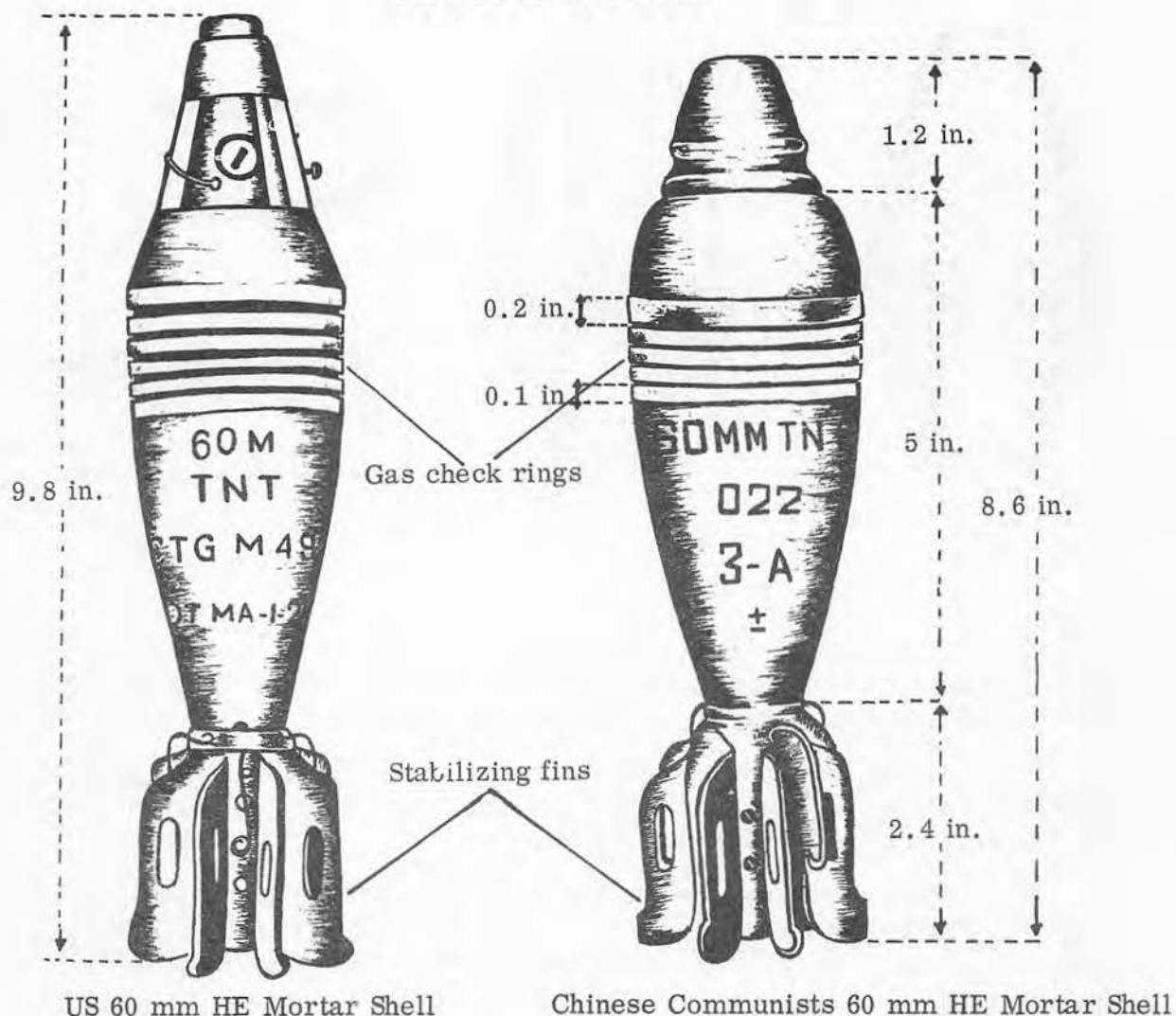
Detonation: This is initiated by a watch and two 4.5-volt batteries which are placed inside the bicycle headlight with wires protruding outside along the frame.

During movement, the ignition device is not linked to the explosive, but upon arrival at the prescribed sabotage site, these two components are connected, and the watch of the ignition device is preset.

The Viet Cong have also adapted another firing device, using bicycle generator power. Thus, during movement, the generator is kept apart from the wheel. When arriving at the sabotage site, the head of the generator is placed against the bicycle wheel. When someone operates the bicycle, the generator sends a spark up the ignition line and initiates the explosive.

MORTAR AND ROCKET AMMUNITION

CHINESE COMMUNIST 60-MM MORTAR HIGH-EXPLOSIVE SHELL WITH MP 82 PLASTIC FUZE

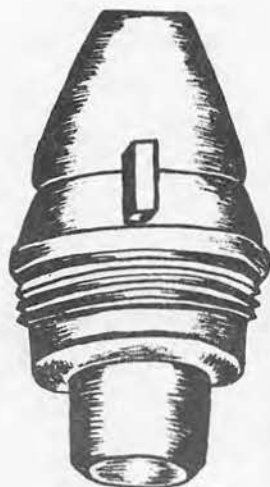


The Chinese Communist 60-mm mortar high-explosive shell, made of iron and cast iron alloy, is provided with a MP 82 plastic fuze and is charged with yellow TNT. This type of ammunition, manufactured by the Viet Cong, is similar to the US 60-mm mortar high-explosive shell and bears the false mark of US ammunition; still, it can be identified by the following features:

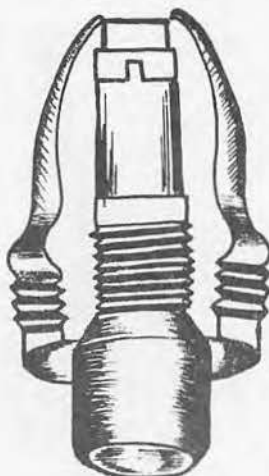
Stabilizing Fin: The shell has eight fins like that of the US shell; however, the fin ends are angular, instead of round as those of the US shell.

Gas Check Rings: It has five gas check rings (one large ring in the upper part and four small rings in the lower part), while the US shell has five gas check rings of the same size.

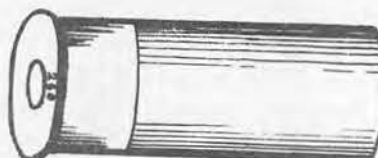
SOVIET MODEL MP 82 PLASTIC FUZE, PROPELLING CARTRIDGE, AND BOOSTER



Fuze



Booster



Propelling cartridge

Plastic Fuze: This fuze is a direct copy of the Soviet fuze, MP 82. It is made of plastic and is dark red. Its components are: firing pin, firing pin spring, firing pin locking disk, initiator, and percussion primer.

These components show that the fuze is an impact (point) detonating fuze and differs from the Soviet fuze, which is a set-back type. However, the size of the fuze shown is similar to that of the Russian fuze.

The original markings, MP 82, (in Russian) near the end of the threads is removed. The fuze is threaded to the 82-mm mortar shell for firing. This mortar round and cartridge is manufactured by Red China and Czechoslovakia and is a direct copy of Soviet mortars and cartridges. They have been used to equip the North Korean Army and the Democratic Republic of Vietnam Army.

When the fuze hits the target, the top of the fuze is crushed. The firing pin pressed by its spring, perforates the firing pin locking disk to detonate the initiator which in turn explodes the percussion primer.

Characteristics

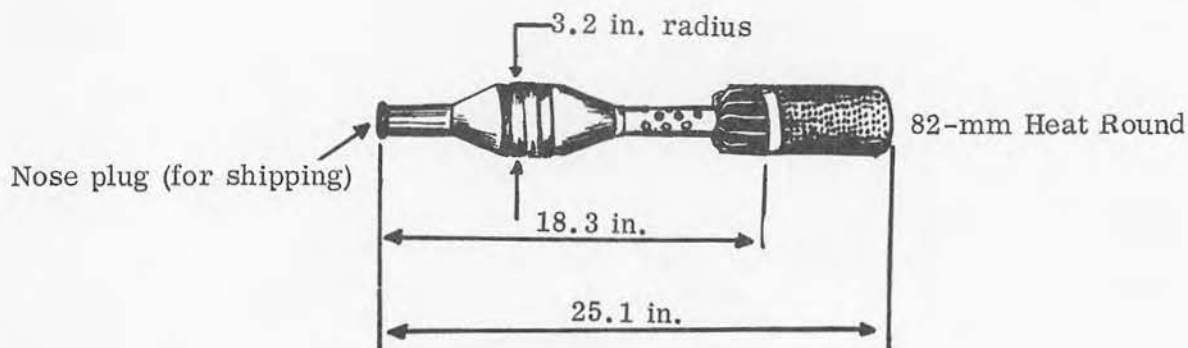
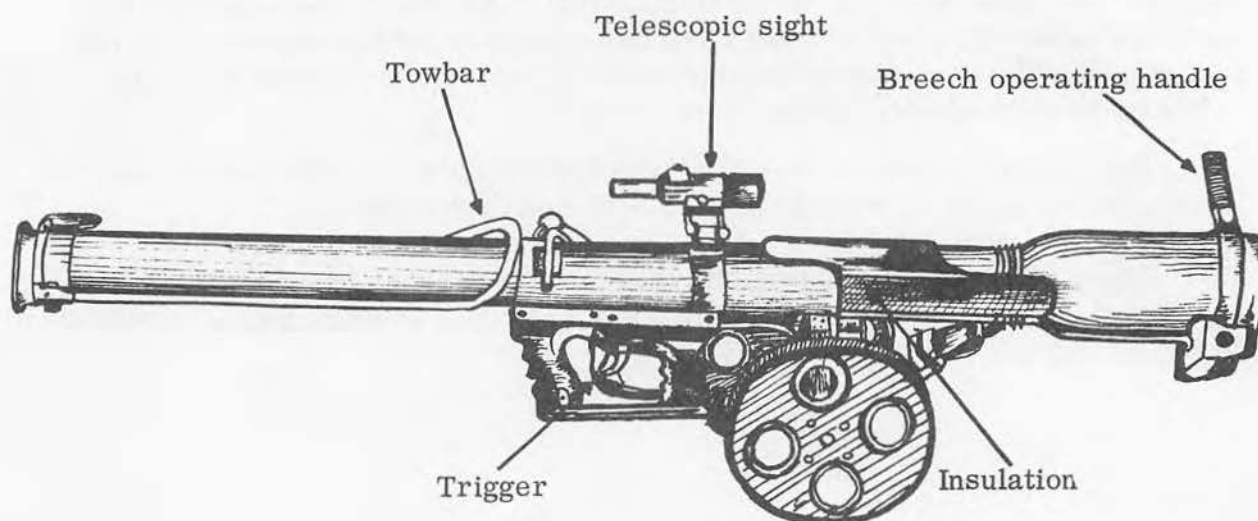
Length	69 mm/2-1/2 in.
Diameter of the fuze	40 mm/1-3/4 in.
Diameter of the threading part	35 mm/1-1/2 in.

Propelling Cartridge: This cartridge is similar to a shotgun shell, 17 mm caliber. Its length is 47 mm and it is composed of two parts, the body and the cartridge case. The body is made of strong cardboard painted red and has a thin coat of wax. The cartridge is made of brass (13 mm thick). In addition, the cartridge is marked with a figure 52 on its base.

The ignition propellant is double-base and consists of nitrocellulose and nitroglycerin, which is formed in 0.31 x 0.02 mm size pellets.

Booster Charge: The propellant charge is also double-base (nitrocellulose and nitroglycerin). The charge, approximately 1 ounce of propellant contained in a cloth bag (22 x 12 mm in size).

CZECHOSLAVAKIAN TARASNICE 82 MM T-21 RECOILLESS RIFLE

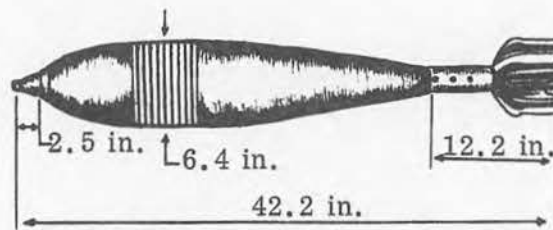
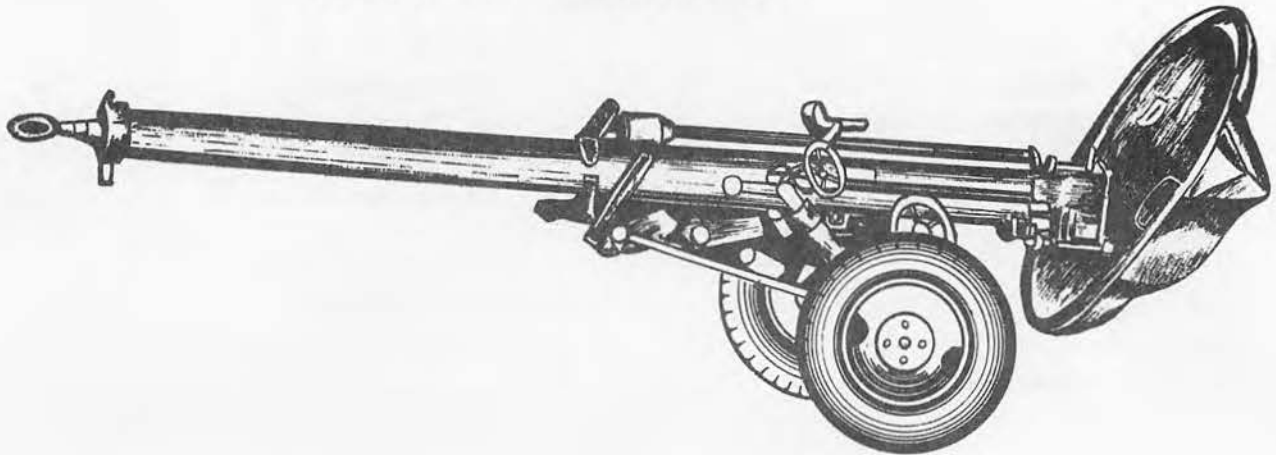


The Tarasnice is an antitank, single shot, smooth bore, recoilless rifle. It fires an 82 mm projectile (HEAT) with fixed tail fins. The battery-initiated ammunition is loaded from the rear end of the barrel. The weapon is mounted on a light carriage with two wheels and a towing hook. When not in use, this hook is folded up along the barrel. The gun can be fired from the shoulder or from its wheeled carriage.

Characteristics

Caliber	82 mm
Over-all length	1.48 m/58 in.
Weight (including carriage and sight	20 kg/44 lb
Sight	Telescope
Effective range:	
Mobile target	300 m/328 yd
Fixed target	600 m/656 yd
Rate of fire	5 to 6 rounds per min
Type of ammunition	82 mm shell; HEAT with stablizing fin and perforated cartridge case.

RUSSIAN 160-MM MORTAR, M 160



160-mm Mortar Shell

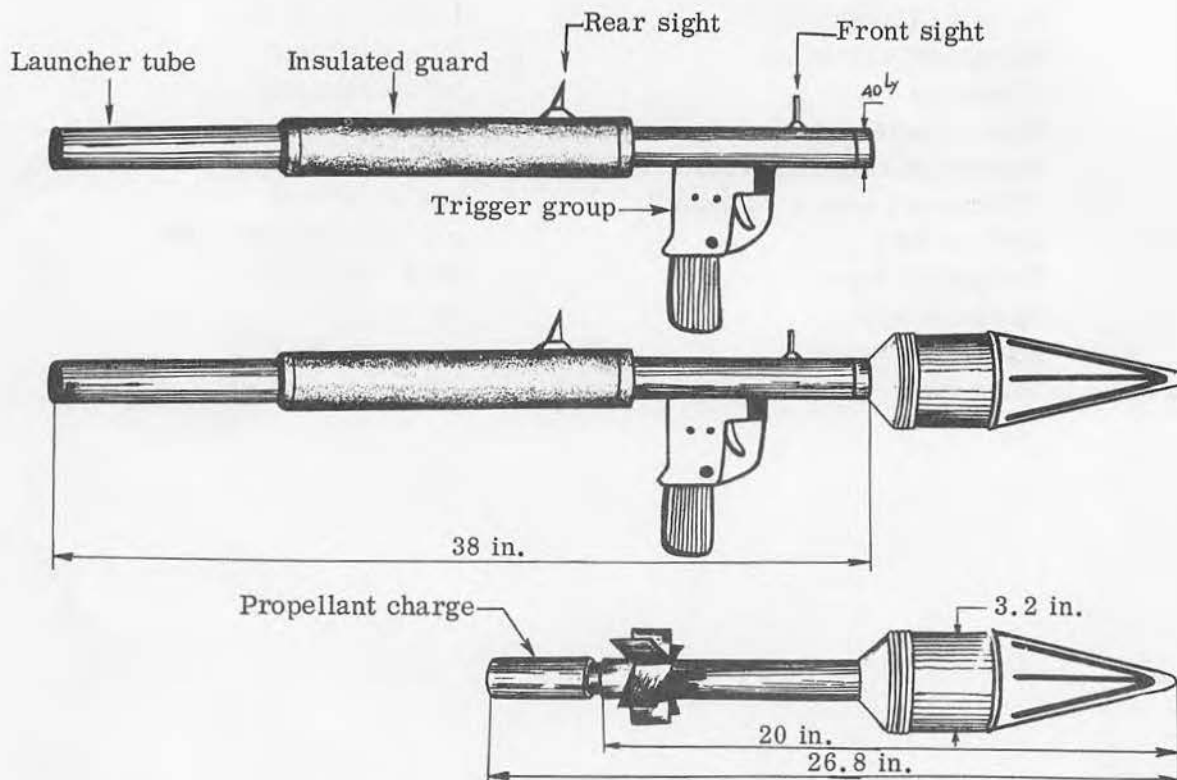
The 160 mm mortar, M 160, which appeared for the first time in 1953, is one of the latest Russian heavy mortars. It was manufactured to replace the 160 mm mortar, M 43. It is different from the M 43; it is longer and has a cylinder on the right side of the barrel and a round base plate. It is heavier than the M 43 and is provided with an improved carriage.

The shell is loaded into the breech block and fired by squeezing the trigger. The barrel may be removed from the base plate and laid horizontally. In this position, the shell is loaded by hand into the breech block. The barrel is moved back to its normal position and the projectile is fired by an ignition wire attached to the trigger. The wheels of this mortar are permanently fixed to the carriage.

Characteristics

Weight in movement	1470 kg/3240 lb
Maximum elevation	65° (estimate)
Traverse	24° (estimate)
Muzzle velocity	343 mps/1125 fps
Maximum range (horizontal)	8070 m/8825 yd
Minimum range (horizontal)	750 m/812 yd
Rate of fire	2 - 3 rounds per min
Projectile type	High explosive
Round weight	43 kg/85 lb
Projectile weight	41.14 kg/90.7 lb
Fuze type	Impact (point detonation)

RUSSIAN ANTITANK ROCKET LAUNCHER, MODEL RPG-2

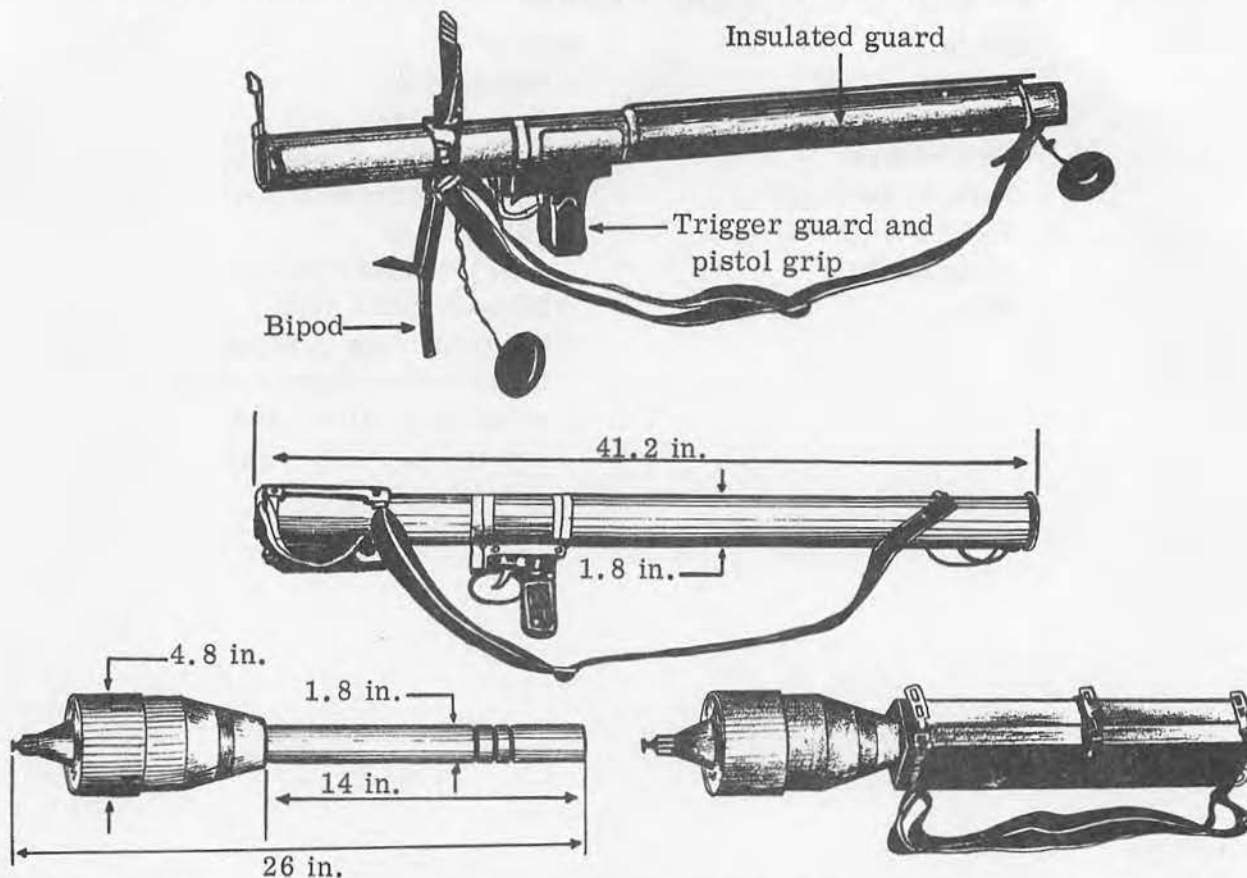


This weapon is a smooth bore, recoilless antitank rocket launcher. One is issued to each Rifle Squad in the Russian Army. Tactically, this weapon is of the same value as the United States and British high explosive antitank rocket launchers. To load, place the stabilizing fins of the projectile in the muzzle of the gun; the largest portion of the projectile will fit in the grooves of the gun muzzle and firmly hold the projectile. The projectile head, 82 mm in diameter, is placed outside of the gun barrel. A gas port is located on the right side of the gun near the hand bar. This weapon, therefore, cannot be placed on the left shoulder for firing. Half of the rocket launcher is covered with insulation to protect the gunner's face and shoulder from heat.

Characteristics

Caliber	40 mm
Weight	2.750 kg/6 lb
Muzzle velocity	84 mps/276 fps
Rate of fire	4 - 6 rounds per min
Type of ammunition	HE antitank ammunition
Weight of ammunition	1.840 kg/4 lb
Penetration	152 to 180 mm/6 to 7 in.
Sight	Stationary front sight Rear sight made of sheet metal folding type; 3 sight holes (50-, 100-, and 150-m/55-, 107-, and 164-yd range)

CZECHOSLOVAKIAN ANTITANK ROCKET LAUNCHER, MODEL P-27



This Czechoslovakian antitank rocket launcher (45 mm caliber), Model P-27, can be considered as equivalent to the Panzerfaust weapon of Germany and the RPG-2 of the Russian Infantry. This antitank weapon is issued to squad echelon in the Czech Army.

Although this weapon is similar in appearance to the German Panzerfaust weapon, its operation is different. When fired, this weapon discharges the propelling gas to the rear. The rear vented gas will neutralize the recoil of the weapon. The rocket is electrically fired by a trigger-operated magneto and is muzzle loaded.

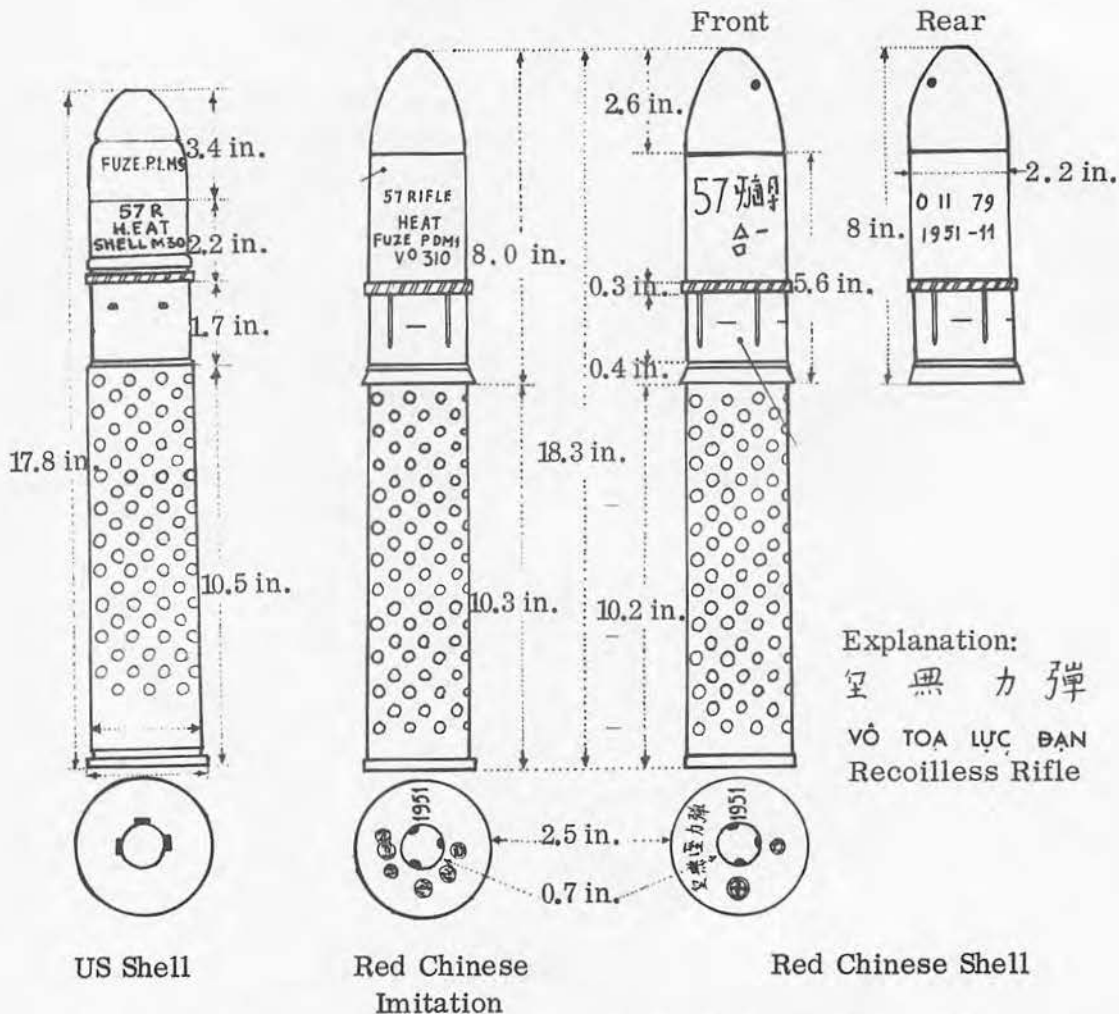
Outstanding recognition features of this weapon are the bipod located near the front end of the tube and the protective insulation covering the launcher, trigger mechanism, and pistol grip.

The rocket launcher is used with antitank high explosive ammunition with stabilizing fins 120 mm in diameter.

Characteristics

Caliber	45 mm
Weight unloaded	6.4 kg/14.1 lb
Sights:	
Front sight	Knife shaped, folding
Rear sight	Leaf shaped, folding
Rate of fire	4 rounds per min
Effective range	73 m/80 yd (mobile target)
	100 m/110 yds (fixed target)
Muzzle velocity	140 mps/459 fps
Type of ammunition	HEAT
Penetration	
(flat trajectory)	170 to 250 mm/6.8 to 10 in. at 0°.

CHINESE COMMUNIST 57-MM RECOILLESS RIFLE SHELL,
ARMOR PIERCING HIGH EXPLOSIVE



A Chinese Communist 57-mm RR cartridge looks like that of US manufacture. The cartridge bears US nomenclature and markings but the two types are different as indicated in the following comparison of characteristics:

Chinese Communist Shell

Fuze: No lettering; two holes in the fuze body opposite each other (perhaps to tighten the fuze to the shell); head is covered by a disk which prevents humidity from entering the fuze.

US Shell

Fuze: Carved with lot number and year of manufacture; no holes on the surface of the fuze body.

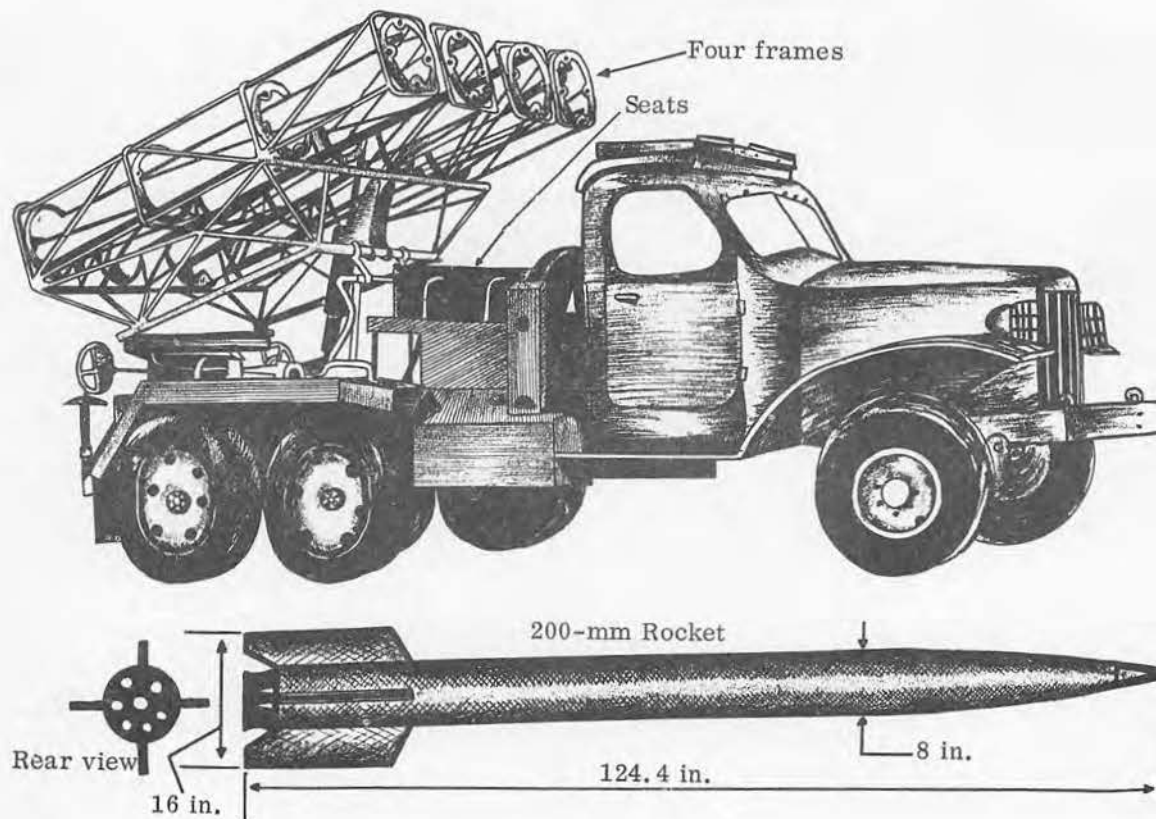
Projectile: Longer (measured from the case opening to the fuze end) than US shell, approximately 15 mm; smoothly painted; precut rotation band 2 mm shorter; not meticulously made; improper nomenclature painted in yellow letters.

Case: Approximately 4 mm longer; four slots on the cartridge case neck; painted dark; rudimentarily fabricated since rough case fitting lines are still present.

Projectile: Painted olive drab with precut rotation band; shell nomenclature properly marked (yellow color).

Case: Meticulously made; smoothly painted with the projectile held firmly by four stamped indentations.

RUSSIAN 200-MM BMD-20 ROCKET LAUNCHER



The Russian 200 mm BMD-20 rocket launcher (four missile type) was exhibited for the first time on Labor Day in 1954 in Moscow. This type of rocket launcher is new to the Soviet arsenal.

The launcher is carried by the ZIS/ZIL-151 trucks (2-1/2 ton) that are frequently utilized for other rocket launchers by Russia. The truck is equipped with an armor shield for protection of the driver's compartment when firing.

The launcher consists of four open crate launching frames with spiraled rails placed to give the rockets right-hand spin when fired. This weapon is equipped with a manual elevating and traversing adjusting handle. The missile is fin-spin stabilized.

Characteristics

Carrier:

Weight of truck with launcher and rockets	8,000 kg/17,636 lb
Weight of truck	4,500 kg/9,900 lb
Engine type	90 horsepower, gasoline, six cylinders
Speed	64 kph/40 mph
Cruising range	660 km/410 miles

Launcher:

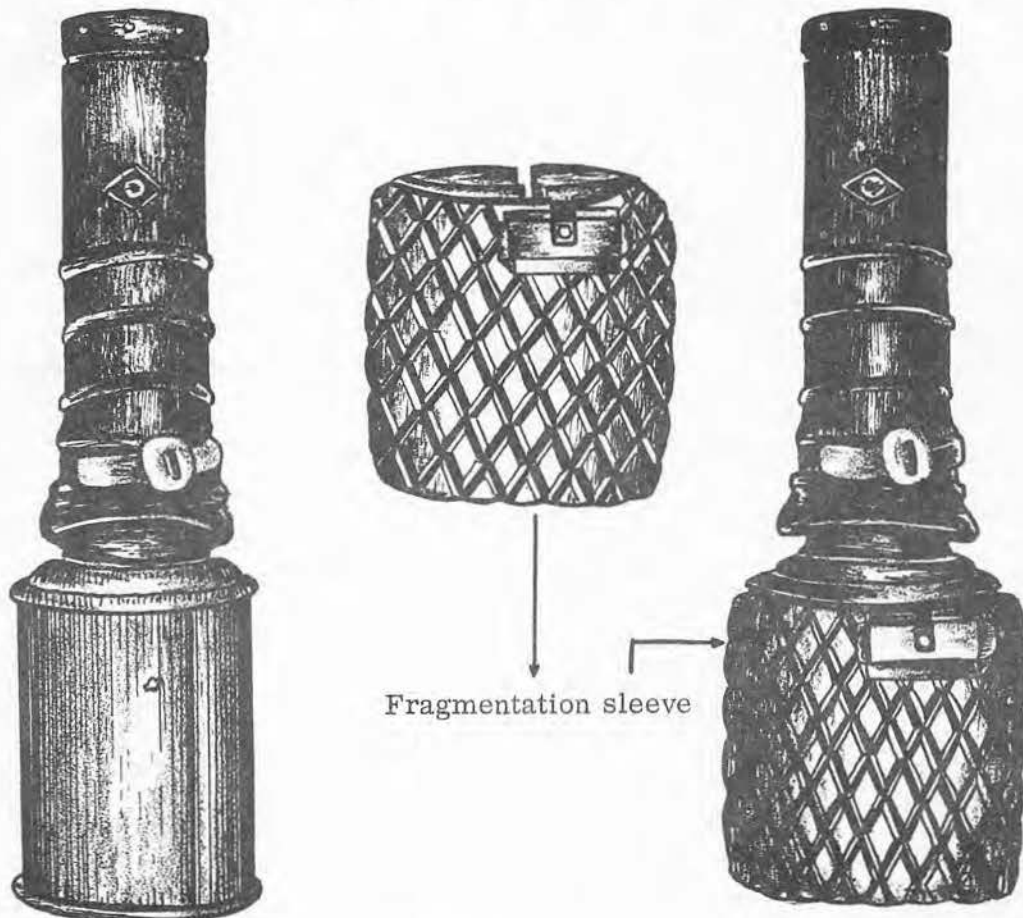
Weight	2,700 kg/5,952 lb
Elevation	9° to 60°
Traverse	20°

Missile:

Caliber	200 mm
Weight	194 kg/428 lb
Range	18,500 m/20,200 yd

GRENADAES

RUSSIAN RGD-33 OFFENSIVE AND DEFENSIVE HAND GRENADE



The RGD-33 offensive and defensive hand grenade is a dual-purpose grenade. As an offensive grenade, it has a 5.5 yd lethal radius. By adding a fragmentation sleeve, it becomes a defensive grenade, which has a 27 yd lethal radius. This sheet metal grenade is normally painted olive brown.

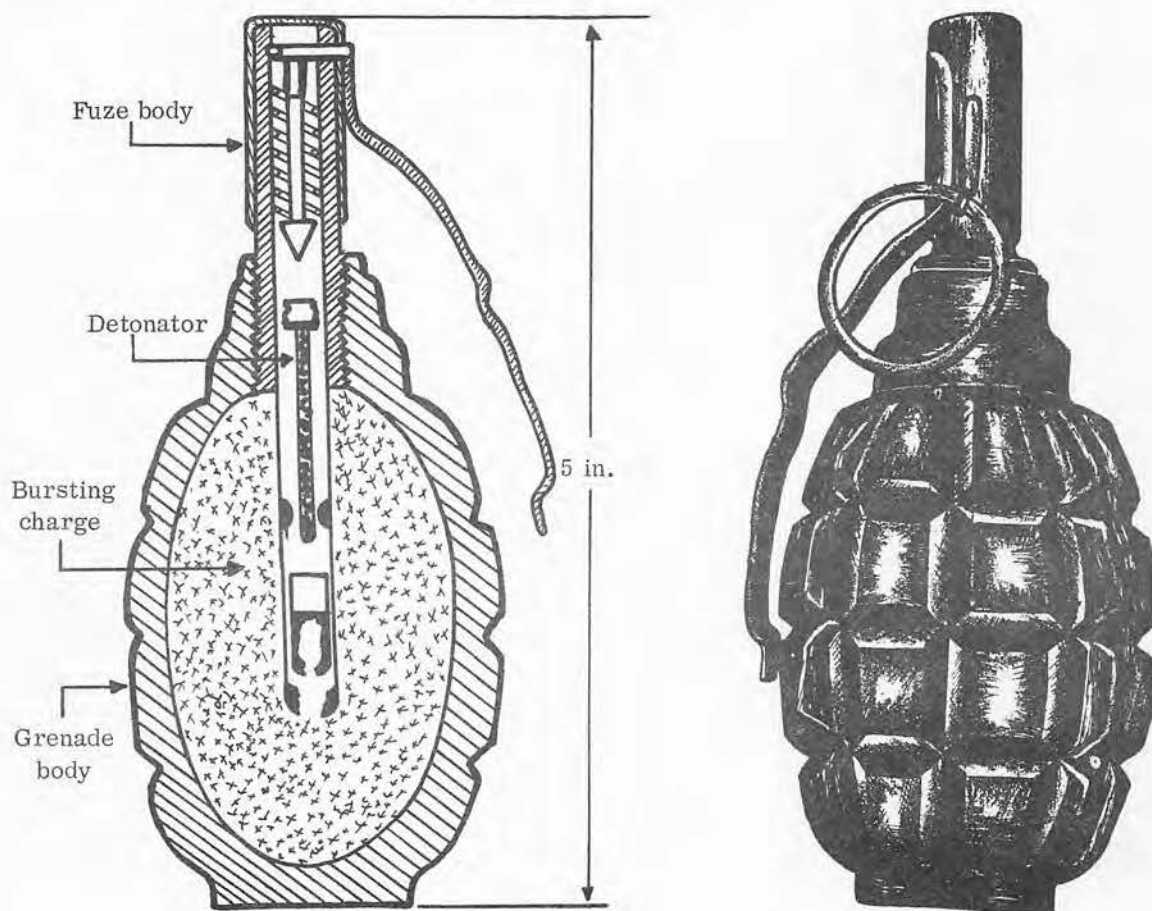
The grenade is thrown vigorously. A spring in the handle forces the body back quickly and the firing pin strikes the primer actuating the delay element.

NOTICE: Duds are dangerous and should be destroyed in place, as the slightest vibration may set them off.

Characteristics

	Offensive grenade without <u>fragmentation sleeve</u>	Defensive grenade with <u>fragmentation sleeve</u>
Weight	0.496 kg/1.1 lb	0.659 kg/1.5 lb
Length	190 mm/7.5 in.	190 mm/7.5 in.
Diameter	45 mm/1.8 in.	52 mm/2.1 in.
Effective fragmentation radius	5 m/5.5 yd	25 m/27 yd
Time fuze	3 - 4 sec delay	3 - 4 sec delay

RUSSIAN DEFENSIVE HAND GRENADE, F. 1



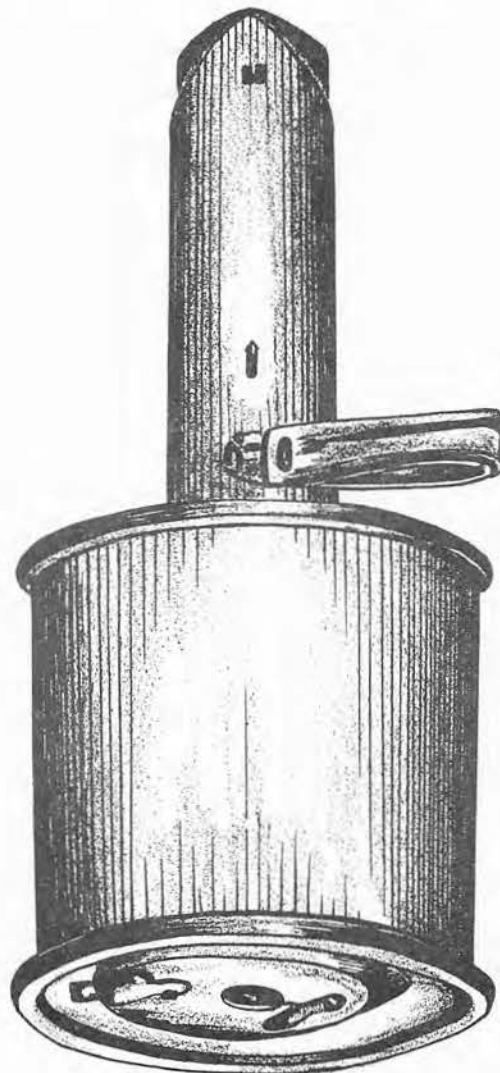
The shape and operation of this F. 1 hand grenade are similar to those of the US Mk 2 grenade. Its case is of serrated cast iron and painted olive drab.

To use, hold the grenade body and safety lever with one hand, remove the safety pin with the other, and throw. When thrown, the safety lever of the grenade springs up, loosening the spring of the firing pin which ignites the primer, burns the time fuze, and explodes the grenade.

Characteristics

Type	Defensive
Use	Antipersonnel
Weight	0.690 kg/1.5 lb
Length	124 mm/5 in.
Diameter	55 mm/2.2 in.
Fuze delay	From 3 - 5 sec
Average throwing range	33 - 45 m/36 - 49 yd
Effective fragmentation radius	14 m/15 yd

RUSSIAN RPG-40 HAND GRENADE



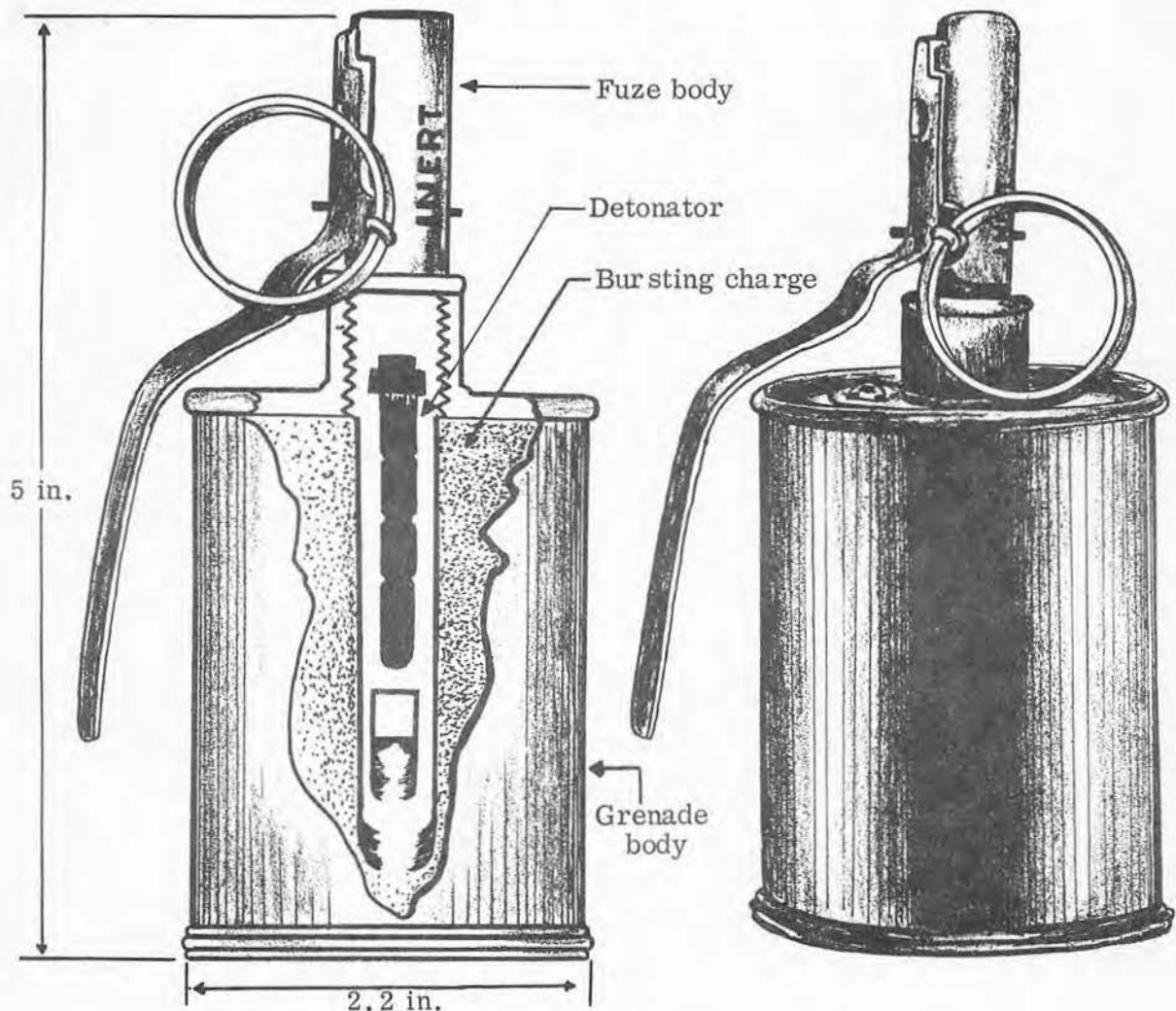
This grenade is used mainly against light armored vehicles. It is made of sheet metal and contains TNT. The primer detonator is inserted into the grenade before the grenade is thrown. The igniting device is placed inside the handle, which is tightly screwed into the top of the grenade. When the safety pin is removed and the safety lever released, the grenade is in the armed position.

NOTICE: Under no circumstances should dud grenades of this type be picked up, as the fuze is armed and the slightest vibration will set it off.

Characteristics

Type	Offensive
Use	Antitank
Weight	1.205 kg/2.7 lb
Length	200 mm/8 in.
Diameter	95 mm/3.4 in.
Effective fragmentation radius	20 m/22 yd
Fuze type	Impact instantaneous

RUSSIAN OFFENSIVE HAND GRENADE, RG-42

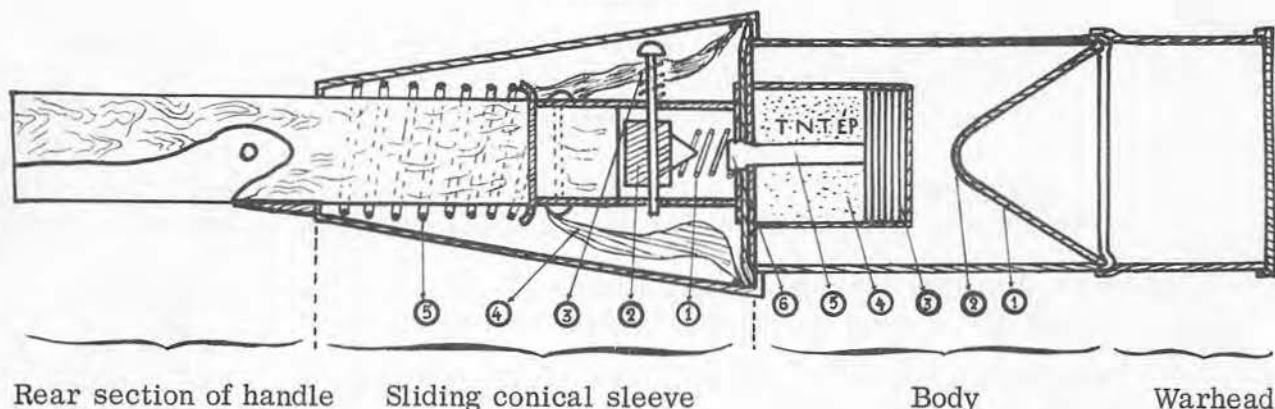


This grenade has a sheet metal cylindrical body which contains 99 grams of TNT. To throw the grenade, hold the safety lever tightly, press it close to the grenade body with one hand, and pull the safety pin with the other. When it is thrown, the safety lever will spring upward and leave the grenade body. The firing pin is forced down and strikes the primer which ignites the time fuze and sets off the grenade.

Characteristics

Type	Offensive
Use	Antipersonnel
Weight	400 g/14 oz
Over-all length	127 mm/5 in.
Diameter	53 mm/2 in.
Time delay	3 to 4 sec
Average throwing range	30 - 40 m/32 - 49 yd
Dangerous radius	15 - 20 m/16 - 22 yd

VIET CONG ANTITANK PARACHUTE HAND GRENADE (Locally Made)



This is a shaped charge grenade composed of four parts:

Head: The head is cylindrical and made of 7.10-mm sheet iron. This cylinder is 7.5 cm/3 in. in diameter and its height depends on the angle of the hollow cone, the quantity of TNT, etc.

Body: The body is a cylinder made of sheet iron and consists of:

- (1) A cone made of brass with a thickness of 2 to 3 mm designed to create a penetrating jet against tanks and armored personnel carriers
- (2) TNT housing
- (3) One partition of cardboard or wood (1- to 2-mm thick) used to regulate the explosive action against the surface of the cone base
- (4) Cast TNT with a 1.55 density and used as the main charge (strong destructive power of the grenade caused by this cast TNT)
- (5) One detonator containing silver fulminate
- (6) One primer of Chinese Communist K . 50 (50 caliber) SMG cartridge.

Parachute Cone: This cone is made of sheet iron. It is used to lock the safety spring when the grenade is in its safety position and is used also as the cone of the parachute when the grenade is thrown. The inside of the cone of the parachute consists of the following parts:

- (1) Safety spring
- (2) Firing pin
- (3) Safety pin and spring
- (4) The parachute attached to the cone at one end and to the wooden handle by a piece of cloth at the other end
- (5) Parachute spring used to unfold the parachute.

Rear Section: This is a cylindrical wooden handle equipped with a parachute lock made of sheet iron and a locking pin laying across the handle.

When using this grenade, firmly hold the wooden handle and the parachute lock, pull out the pin from the handle, and throw the grenade.

When thrown, the spring pulls the parachute cone to the rear and the parachute deploys. The parachute will stabilize the direction of the grenade and assure proper impact attitude on the target. At the same time, the cone moves rearward and the spring pulls the safety pin out of the grenade and allows the firing pin to strike the detonator.

Upon impact, the inertia-activated firing pin strikes the detonator and explodes the grenade.

The piercing power of this grenade is up to 100 mm/4 in. of steel. If the grenade hits the track or the engine of an armored personnel carrier, the armored personnel carrier will be disabled. If it hits the personnel compartment, the penetrating effect of the jet will cause heat and high pressures which will cause casualties abroad.

Characteristics

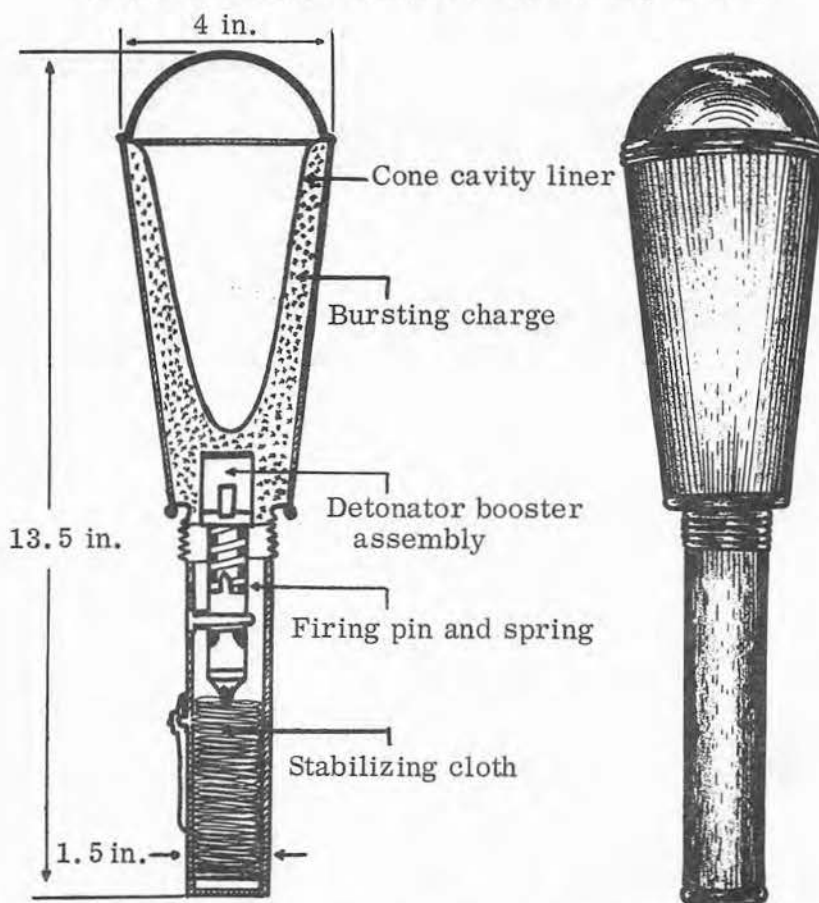
Length	35 cm/13-1/2 in.
Weight	500 to 700 g/1 to 1-1/2 lb
Head diameter	7.5 cm/3 in.

To disassemble the grenade, before it is thrown, first remove the parachute lock and then the safety pin assembly. The removal of the safety pin is easy and not dangerous since the firing pin strikes the detonator by inertia only.

After the parachute assembly has been disassembled, never let the grenade fall head down on the ground since this will create the inertia which will cause the firing pin to strike the primer and explode the grenade. (The disassembly must be done by an ordnance specialist.)

NOTE: It is absolutely prohibited to touch a dud grenade, since it may explode unexpectedly. Report it to an ordnance specialist for disposition.

RUSSIAN ANTITANK HAND GRENADE, RPG-6



This antitank hand grenade, RPG-6, is a shaped charge grenade which can be used against personnel because of its effective fragmentation radius. Therefore this grenade is thrown from cover.

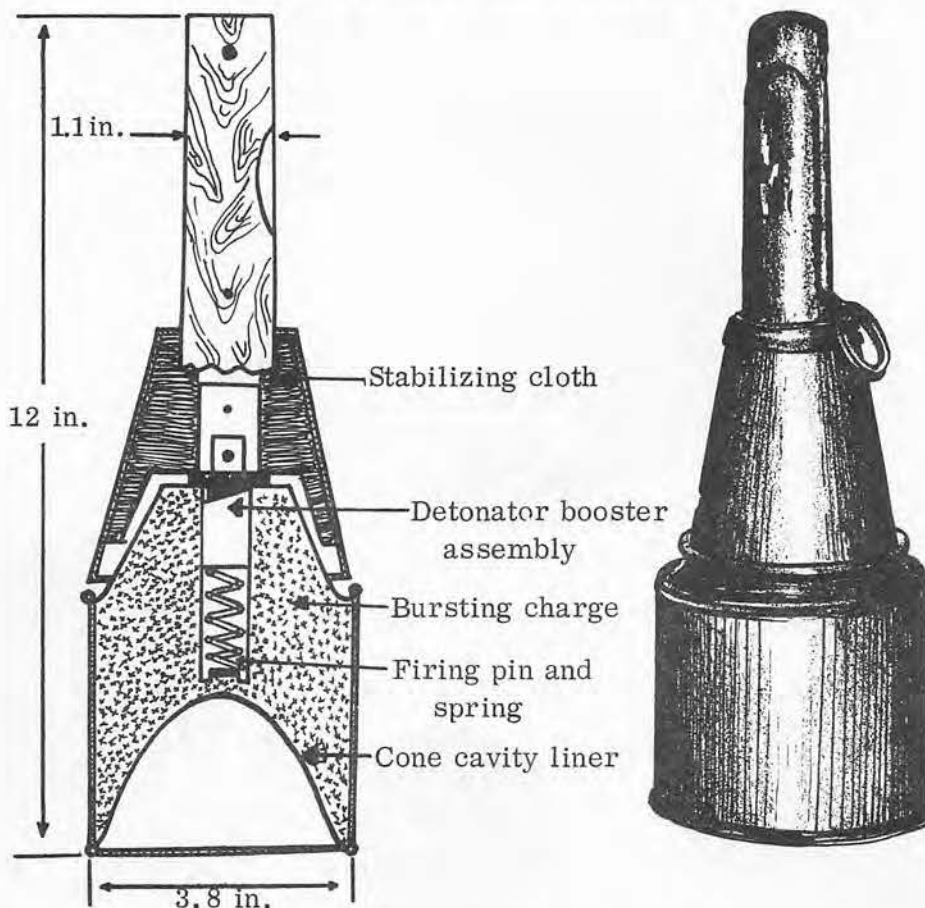
To use, hold the grenade handle and safety lever tightly with one hand and pull the safety pin with the other. When thrown, the grenade is balanced by four pieces of parachute cloth that eject from the handle as the safety lever is ejected.

The grenade explodes on impact. Unlike the RPG-3 grenade, this type of grenade has a crescent shaped head and its handle is made of sheet metal instead of wood.

Characteristics

Type	High explosive
Use	Antitank and antibunker
Weight (including fuze)	1.020 kg/2.4 lb
Over-all length	343 mm/13.5 in.
Fuze	Impact
Average throwing distance	18 m/19 yd
Penetration	100 mm/4 in.
Fragmentation radius	20 m/22 yd

RUSSIAN RPG-43 ANTITANK HAND GRENADE



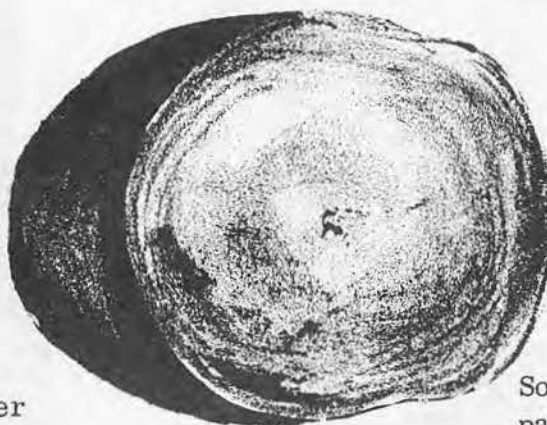
The RPG-43 hand grenade is an antitank hand grenade and is used to attack armored cars and fortified defensive positions. The grenade equilibrium device consists of two pieces of cloth and a steel cone. This device is designed to provide balance for the grenade and to ensure that the head of grenade accurately strikes the target. To use, pull out the safety pin and throw. The grenade will explode upon striking the target. It is characterized by a large cylindrical body, wooden handle, and steel parachute cone.

Characteristics

Type	High explosive
Weight (including fuze)	1.203 kg/2.7 lb
Over-all length	300 mm/12 in.
Fuze	Impact
Penetration	75 mm/3 in.
Bursting radius fragmentation	20 m/22 yd

VIET CONG HOMEMADE SODIUM INCENDIARY GRENADE

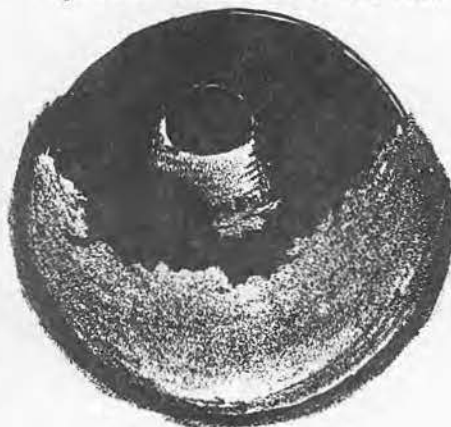
Sodium grenade with wax cover



Part of wax cover removed from sodium grenade



Sodium grenade with part of wax cover removed



Paper covering the opening of sodium grenade



This spherical-shaped grenade is made of two hemispherical shaped pieces of metal welded together and is covered by a coat of wax.

There are two outlets on the grenade body, 10 mm and 3 mm in diameter. Both of these outlets are sealed with a piece of light paper. One third of the grenade case is filled with sodium. This substance will burn and smoke upon contact with water.

Prior to using this incendiary grenade, remove the coat of wax completely and the two pieces of paper blocking the outlets. Throw the spherical cases into water; the grenade will send out flames and smoke for 4 or 5 sec in one direction for about 1 m. Despite the burning, the incendiary grenade case remains intact and emits a particular smell similar to that of kerosene. If touched, it feels as if it were covered with a coat of soap.

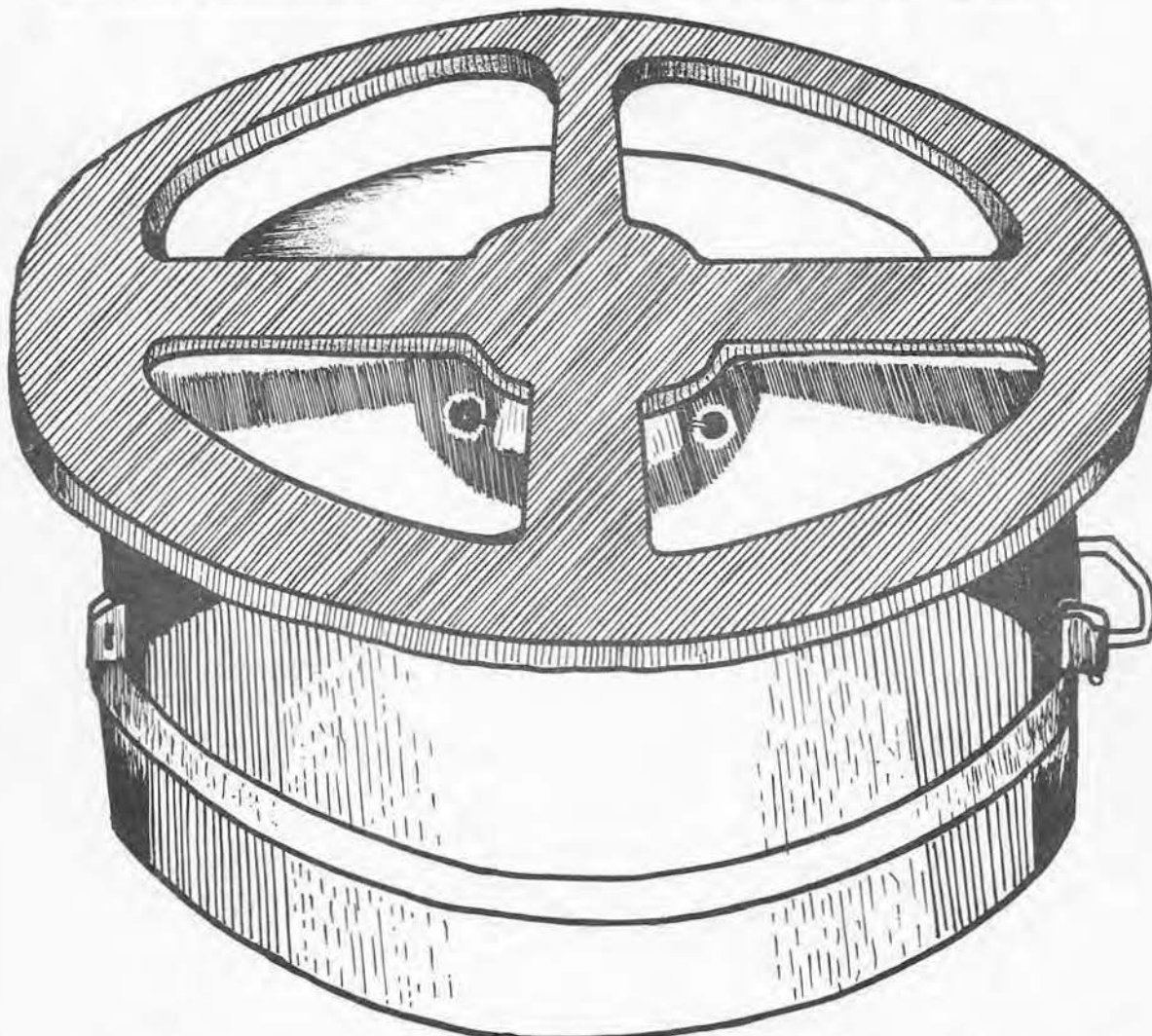
This grenade is used to set fire to depots or flammable material. It is very effective for sabotage activities.

Characteristics

Over-all weight	45 g/1-1/2 oz
Weight of wax and paper	5 g/0.10 oz
Weight of the spherical cases and sodium	40 g/1-1/4 oz
Diameter	38 mm/1-1/2 in.
Thickness of metal case	1.25 mm/0.05 in.

MINES AND BOMBS

CHINESE COMMUNIST ANTIPERSONNEL AND ANTITANK MINE NO. 8



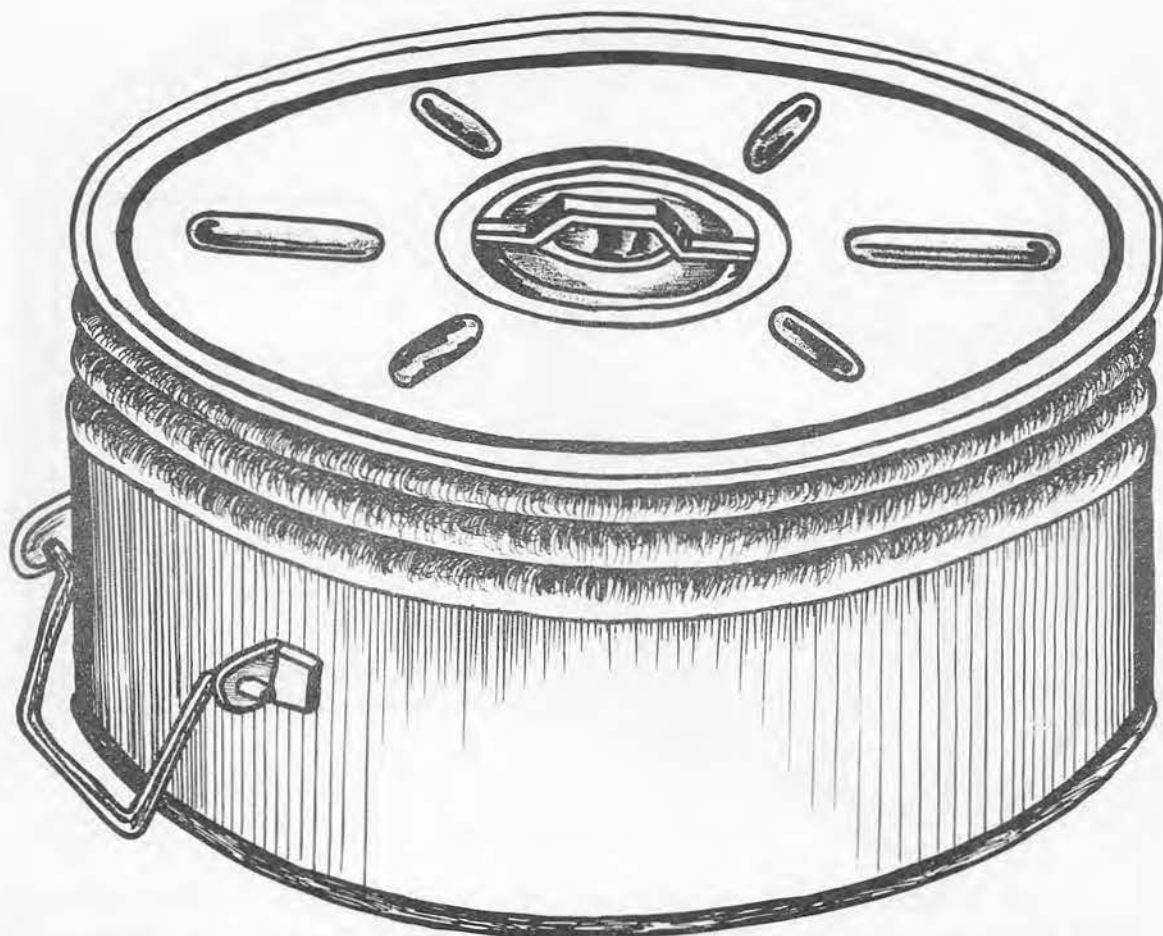
This antipersonnel and antitank mine is made of cast iron and frequently painted black.

In order to detonate the mine a 13,600 kg/30 lb pressure on the pressure ring is required. However, less pressure can detonate the mine if the pressure is placed on the edge of the pressure ring. It can be detonated by a pull or friction firing device. The main charge is TNT or picric acid. To disarm, first disconnect any trip wires attached. Attach a 50-m-long wire or rope to the mine, pull the mine out of the ground, insert a safety bar in the slot on the side of the fuze, remove the pressure ring, and then unscrew the fuze. Turn the mine upside down and catch the primer as it falls out.

Characteristics

Weight	5.400 kg/12 lb
Weight of the explosive	2.270 kg/5 lb
Diameter of the mine	228.6 mm/9 in.
Height of the mine	101.6 mm/4 in.

RUSSIAN TM-41 ANTITANK MINE

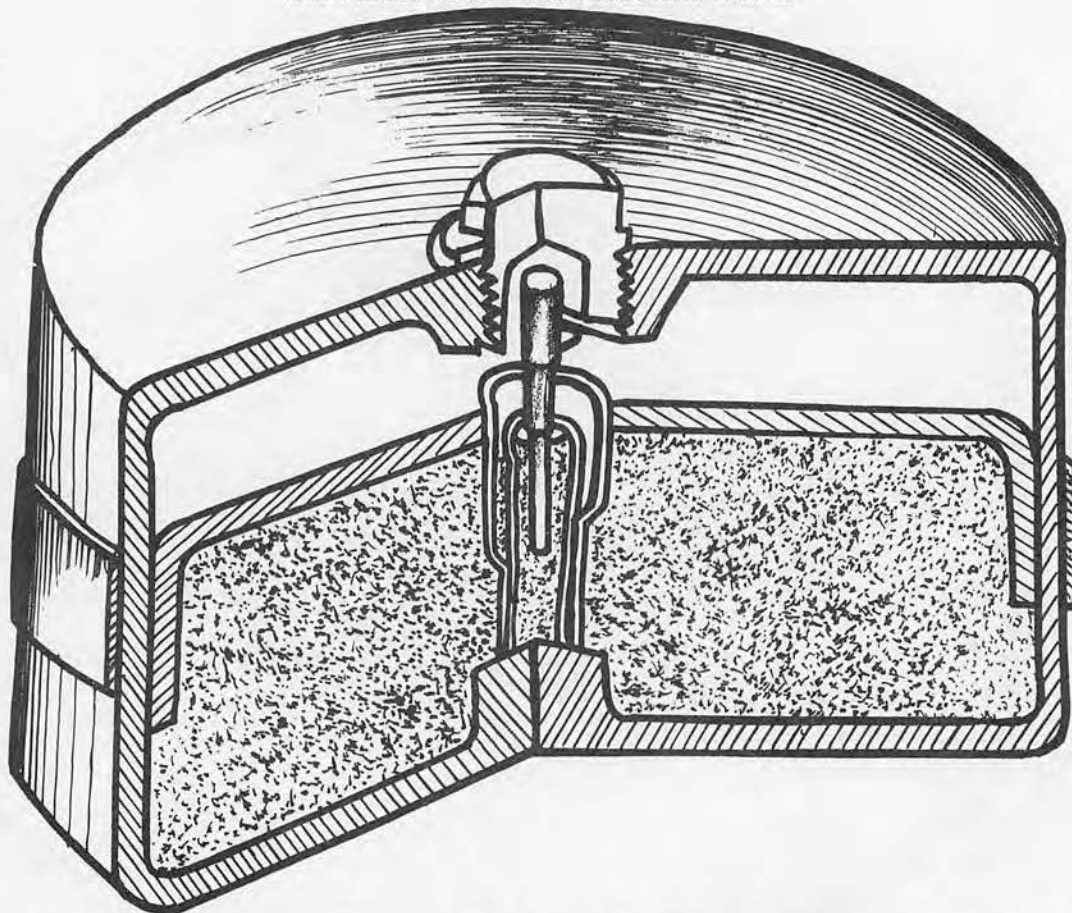


This mine is made of blued sheet metal often painted white or dark olive drab. The pressure-type firing device, which is located under the pressure cap, requires 160 kg/350 lb of pressure to activate the mine. This mine can remain operative for many months when it is waterproof. To disarm this mine, unscrew the pressure cap and gently pull out the fuze with the attached detonator. A blasting cap is attached to this fuze.

Characteristics

Weight of the mine	5.500 kg/12 lb
Weight of the charge	3.600 kg/8 lb
Height of the mine	133 mm/5 in.
Diameter of the mine	254 mm/10 in.

RUSSIAN TMB-2 ANTITANK MINE

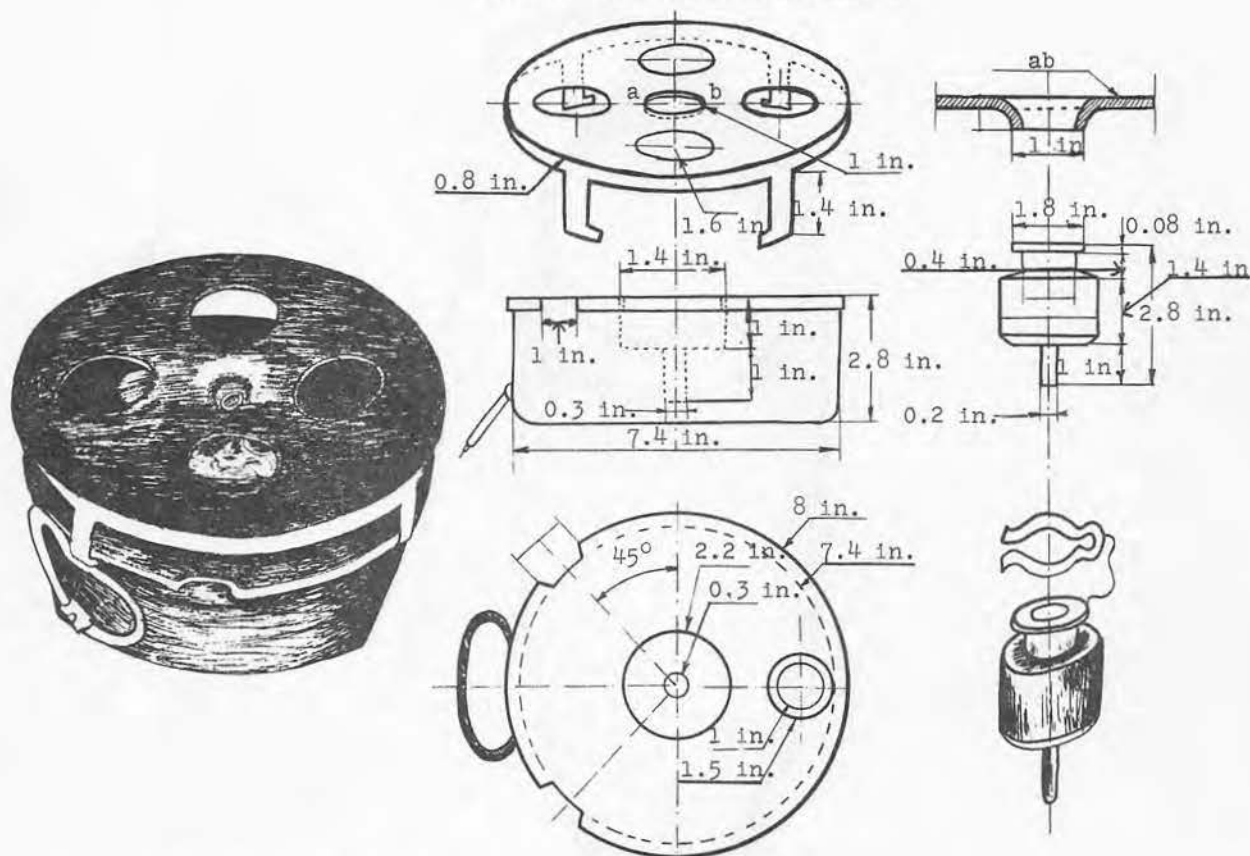


The Russian TMB-2 mine is one of the standard, nonmetallic, antitank mines used in the Soviet Army. It is laid separately or with metallic and wooden mines. The mine cannot be detected by a mine detector.

Characteristics

Mine case	Tar impregnated cardboard
Color	Black or brown
Height	153 mm/6 in.
Diameter	275 mm/11 in.
Weight of the mine	7 kg/15.4 lb
Weight of the explosive	4.900 kg/11 lb (Amatol)

VIET CONG ANTITANK MINE



The Viet Cong locally constructed antitank mine with iron case consists of 2 main parts, the cap or pressure plate and the body.

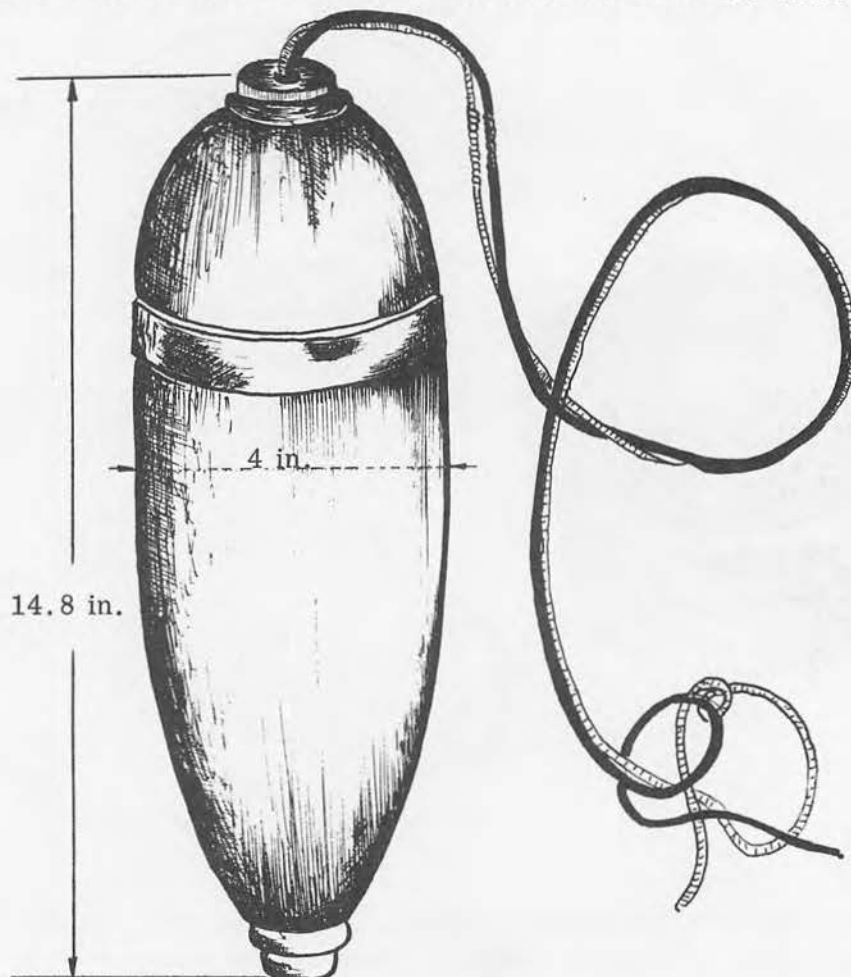
Mine Cap (Pressure Plate): This is oval shaped and has a hole in the center to accommodate the 25-mm diameter fuze.

Mine Body: Two holes are located in the top of the mine, one to accommodate the fuze and the other to load the explosive.

Characteristics

Color	Olive drab
Over-all weight	5.200 kg/11-1/2 lb
Top diameter	200 mm/8 in.
Bottom diameter	185 mm/7 in.
Height	75 mm/3 in.
Explosive charge	TNT (poor quality)
Material of mine body	Sheet iron

VIET CONG LOCALLY CONSTRUCTED ANTITANK 100-MM MINE

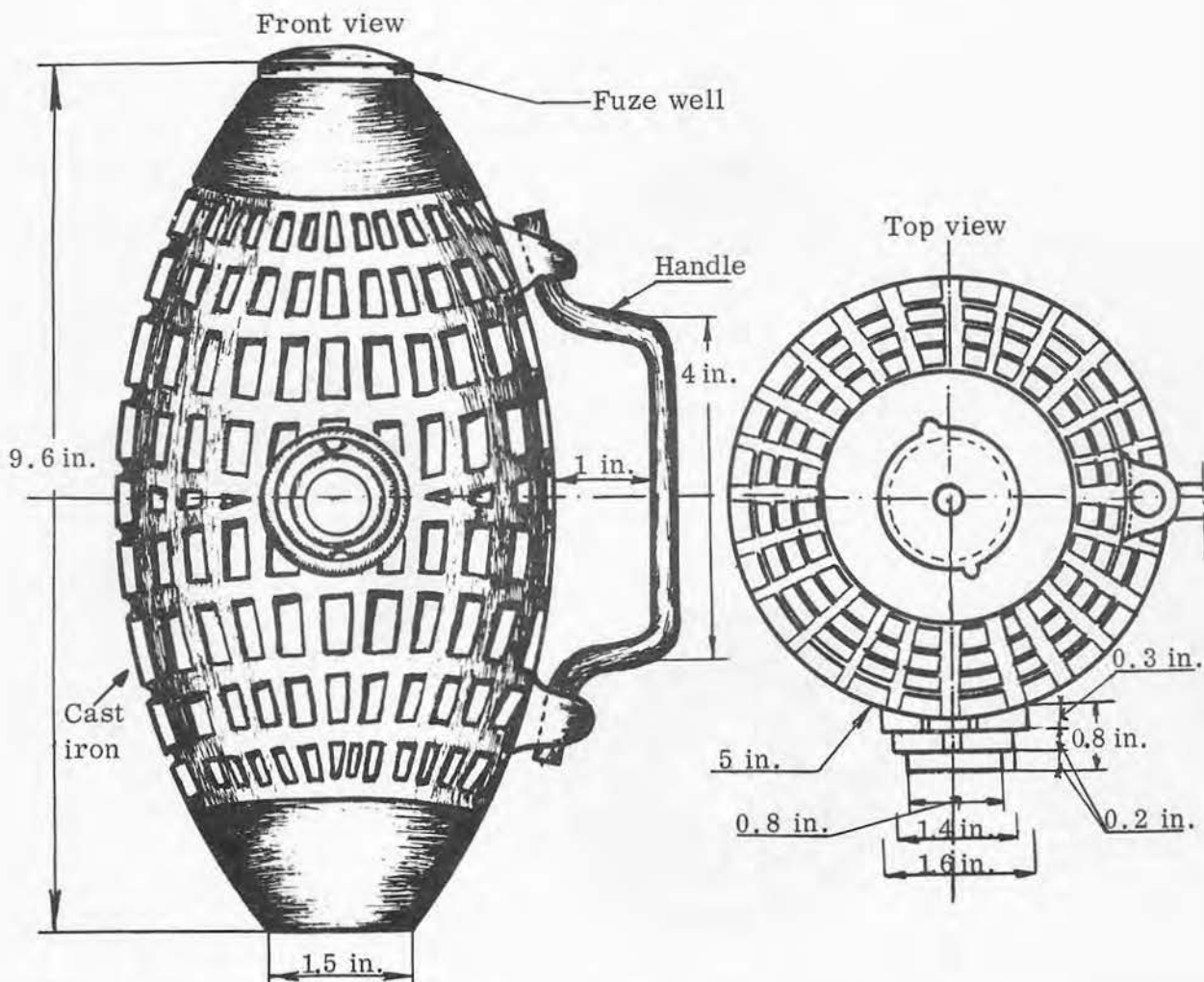


This mine is a modified British 100-mm mortar shell (oval-shaped case) utilizing an electric firing device. The fuze well is cut off and a hole is drilled into the explosive to accommodate an electric blasting cap.

Characteristics

Color	Black
Over-all weight	6 kg/13 lb
Diameter	100 mm/4 in.
Length	370 mm/15 in.
Explosive charge	TNT (poor quality)
Charge weight	1.55 kg/3-1/2 lb
Mine case weight	4.500 kg/10 lb
Mine case mixture	Cast iron

VIET CONG CAST IRON FRAGMENTATION ANTITANK MINE



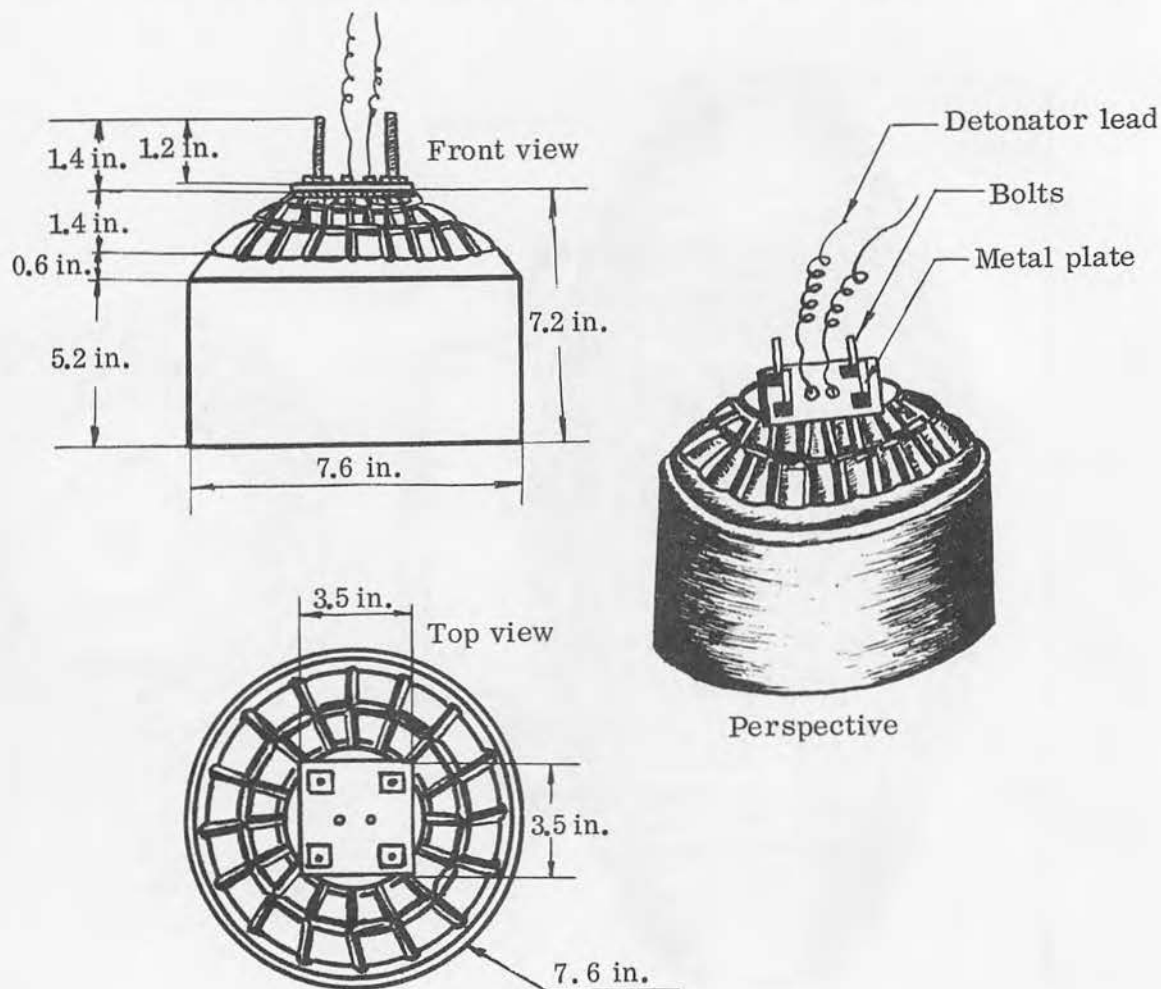
This oval-shaped mine is crisscrossed by serrations except on the two ends. On the mine body and between the ends is a handle which is passed through two eye hooks attached to the mine body.

There is a hole, 40 mm/2 in. in diameter, with a cover at the end of the mine. When used, this cover is removed and replaced by an electric blasting cap.

Characteristics

Color	Grey (cast iron)	Diameter	125 mm/5 in.
Over-all weight	5 kg/12 lb	Explosive charge	Melinite
Length	240 mm/9 in.	Operation	Electric

VIET CONG BETEL BOX-SHAPED MINE, LOCALLY MADE OF CEMENT

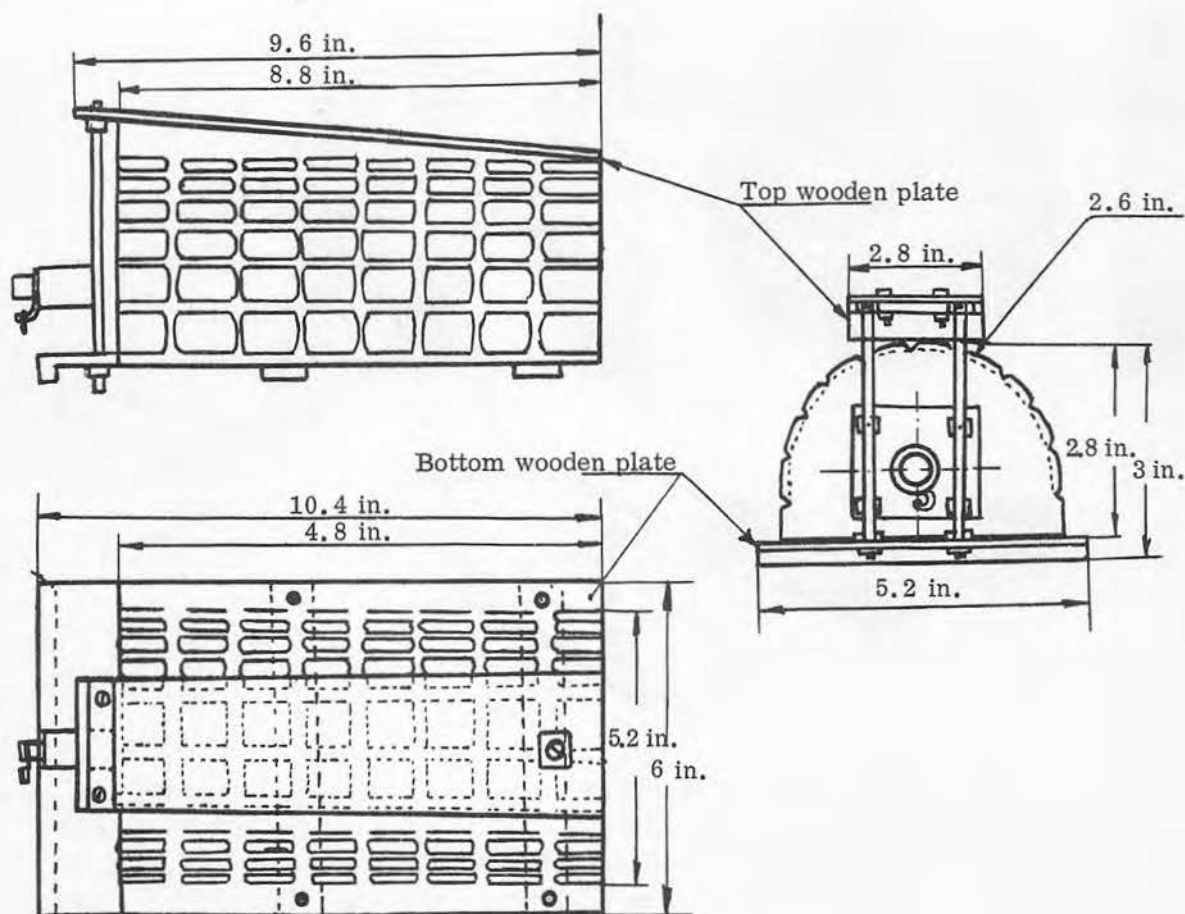


This mine is constructed of cement with an electric firing device and serrations in the center of the case. The end of the mine has a piece of iron attached by four bolts to hold the electric blasting cap.

Characteristics

Color	Grey
Over-all weight	6 kg/13 lb
Explosive charge	TNT (poor quality)
Diameter	190 mm/8 in.
Mixture of mine body	Cement
Operation	Electric

VIET CONG TURTLE-SHAPED MINE LOCALLY MADE OF CEMENT

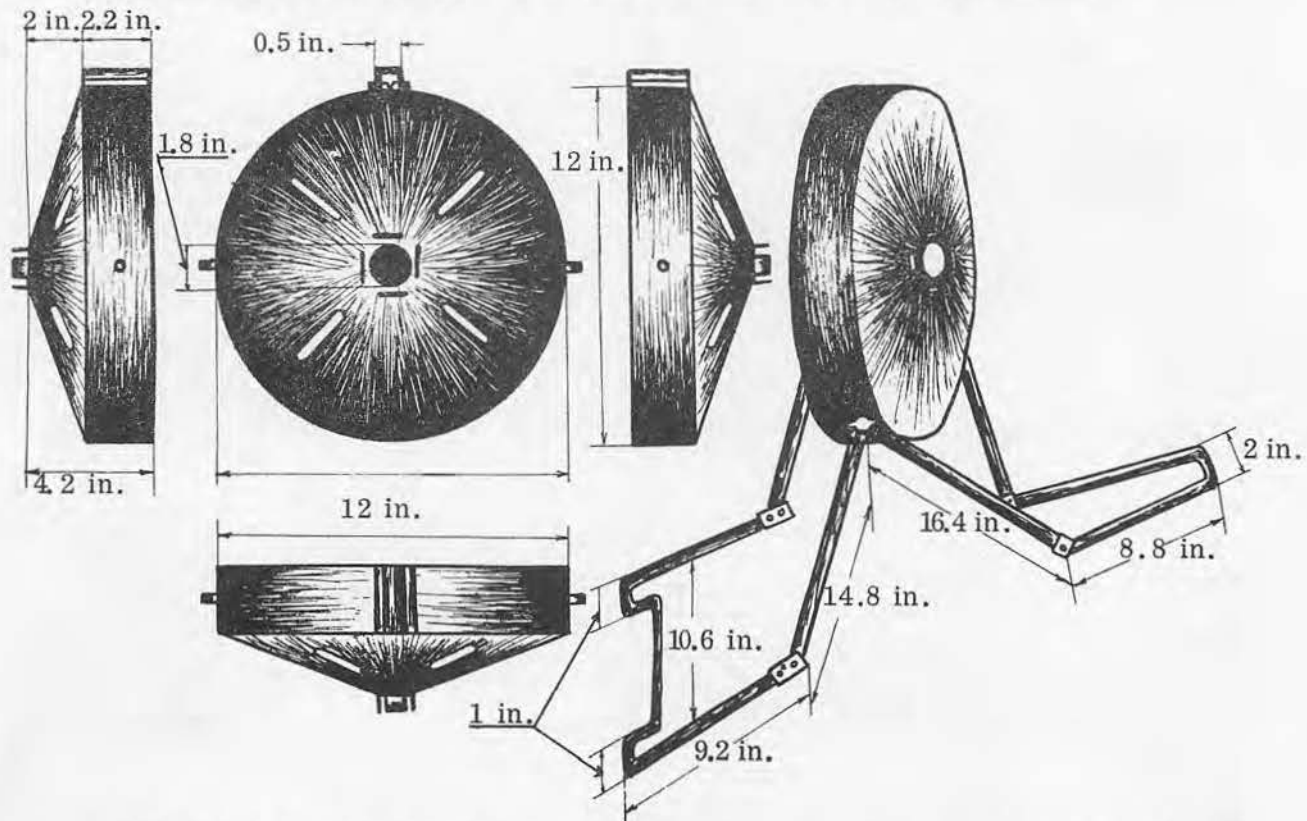


This mine is constructed of cement with an electric firing device. Usually the mine is fastened to a long pole. A part of the case has a square piece of iron attached by four screws to hold the fuze in place.

Characteristics

Color	Grey
Over-all weight	6 kg/13 lb
Length	220 mm/9 in.
Diameter	130 mm/5 in.
Explosive charge	TNT (poor quality)
Mixture of mine case	Cement
Operation	Electric

VIET CONG FIXED DIRECTIONAL FRAGMENTATION DH-10 MINE



The Viet Cong DH-10 mine is designed to counter massed infantry attacks and to be used against light-armored vehicles. It is also used against helicopters when discharging troops and to attack or sabotage airfields or airstrips. This mine can be fixed on bipods and placed on all types of terrain. The DH-10 mine has characteristics similar to those of the US Claymore mine, M18A1. The mine is composed of two parts:

(1) **Body:** This is shaped like a large saucer, constructed of sheet metal, and painted olive drab. A hooded sight is soldered to the body and is used to aim the mine.

(2) **Bipods:** These are composed of four steel rods and two frames (15-mm width). The steel folding rods are fixed to the frame by screws and the bipods are fixed to the mine body by wing nuts.

The mine can be identified by its concave and convex sides. The concave side is aimed at the objective so that when the mine explodes fragments will be shot in an arc. (The body contains from 420 to 450 cylindrical steel fragments, each 12 mm in diameter.) The convex side has a well where the detonator is placed. The hole has a round sheet metal cover with four slots.

Usage:

When used against infantry attack, the mine is placed 150 to 200 meters in front of the target; against light-armored vehicles, the mine is placed 50 meters from the route of the vehicle. To breach a barbed wire fence or a wall, three mines are placed in a triangle adjacent to the wall or fence. When the mines explode, a breach of 3 m/3 yd in width and 40 to 50 m/44 to 54 yd in depth is exposed. To use this mine against helicopters and paratroopers, it is planted in open terrain with the concave side up or placed at the edge of a jungle at a 45° angle. When sighting the DH-10 mine, use the range correction table below.

RANGE CORRECTION (ELEVATION)

Range		Aim above target	
(m)	(yd)	(m)	(in.)
100	110	0.50	19.6
150	165	1.00	39.4
200	220	1.75	70.0

Destruction:

When the mine explodes its fragments will spread over an area having 8% to 10% of effectiveness as compared with the burst range. For example: at a 50-m range, the surface of dispersion will be effective from 4 to 5 m, at a 100-m range, the surface of dispersion will be effective from 8 to 10 m, and at a 200-m range, the surface of dispersion will be effective from 16 to 20 m. On each square meter of the surface of dispersion, an average of five fragments are counted.

Care and Maintenance:

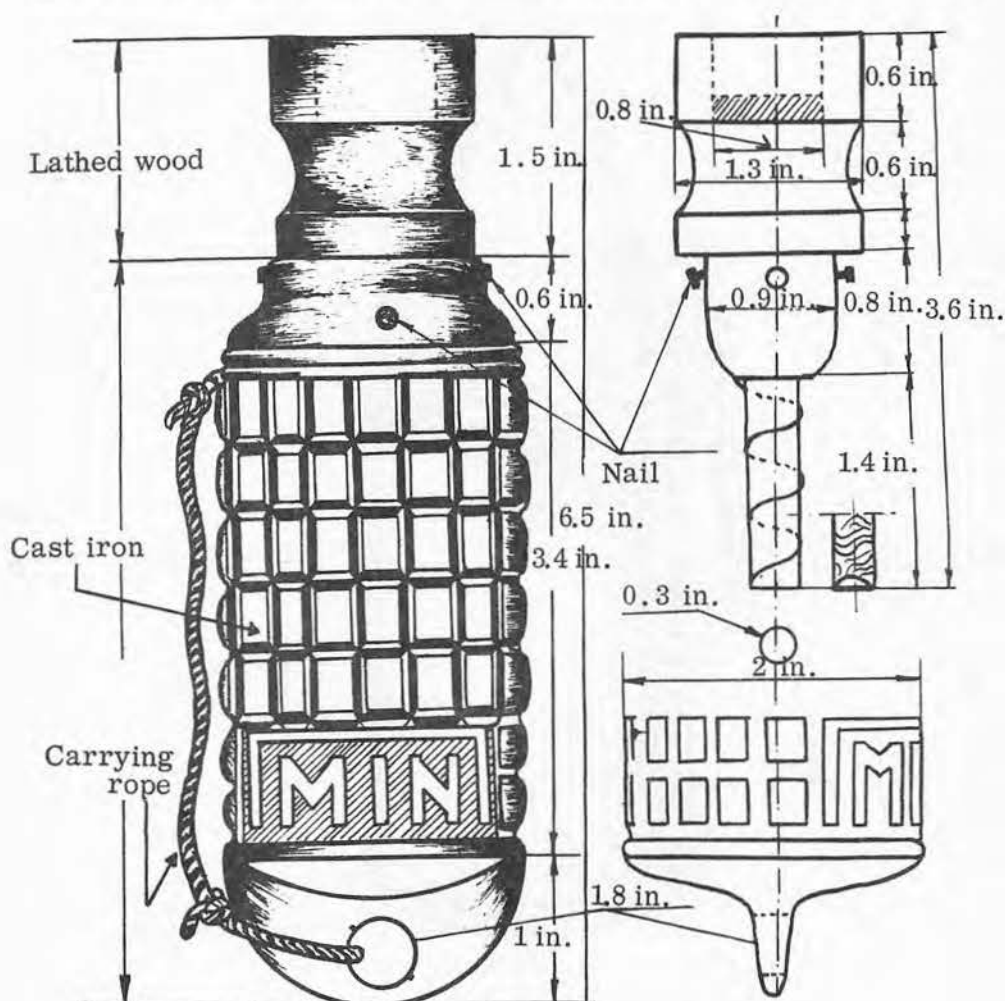
To prevent the mine from being damaged and from exploding by accident, the Viet Cong have instructed the units using the mine to apply safety measures required and to avoid (1) humidity, (2) sunshine, (3) shock (when the detonator is in the mine) or (4) the introduction of the detonator into the mine prior to use.

NOTE: Under no circumstances is a captured mine of this type to be used tactically by friendly troops.

Characteristics

Width	54 mm/2 in.
Diameter	300 mm/12 in.
Diameter of detonator hole	44 mm/1-3/4 in.
Depth of detonator hole	51 mm/2 in.
Weight	9 kg/20 lb
Weight of explosive	4 kg/8 lb
Initiation	Electric blasting cap
Effective range against infantrymen	150 - 200 m/164 - 218 yd
Effective range against armored vehicles	50 m/54 yd

VIET CONG CYLINDRICAL HOMEMADE FRAGMENTATION MINE



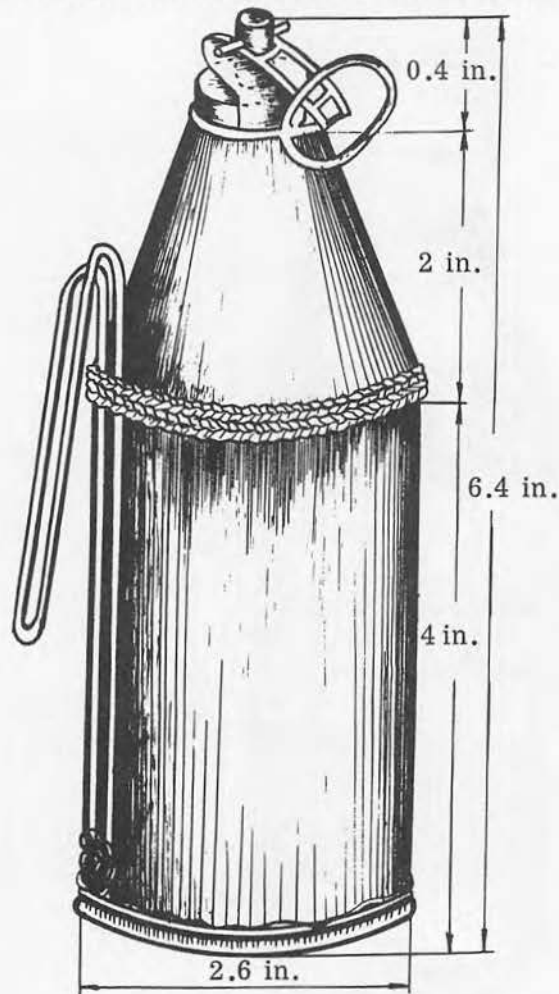
This cylindrical homemade mine is constructed of cast iron. The mine body is painted grey and has serrations for fragmentation effect.

When the wire ring is pulled out, the friction-type igniter ignites the time fuze and detonates the blasting cap, which in turn detonates the mine.

Characteristics

Color	Grey (cast iron color)
Over-all weight	1 kg/2 lb
Diameter	50 mm/2 in.
Explosive charge	TNT
Operation	Common friction-type fuze

VIET CONG HOMEMADE ANTIPERSONNEL MINE

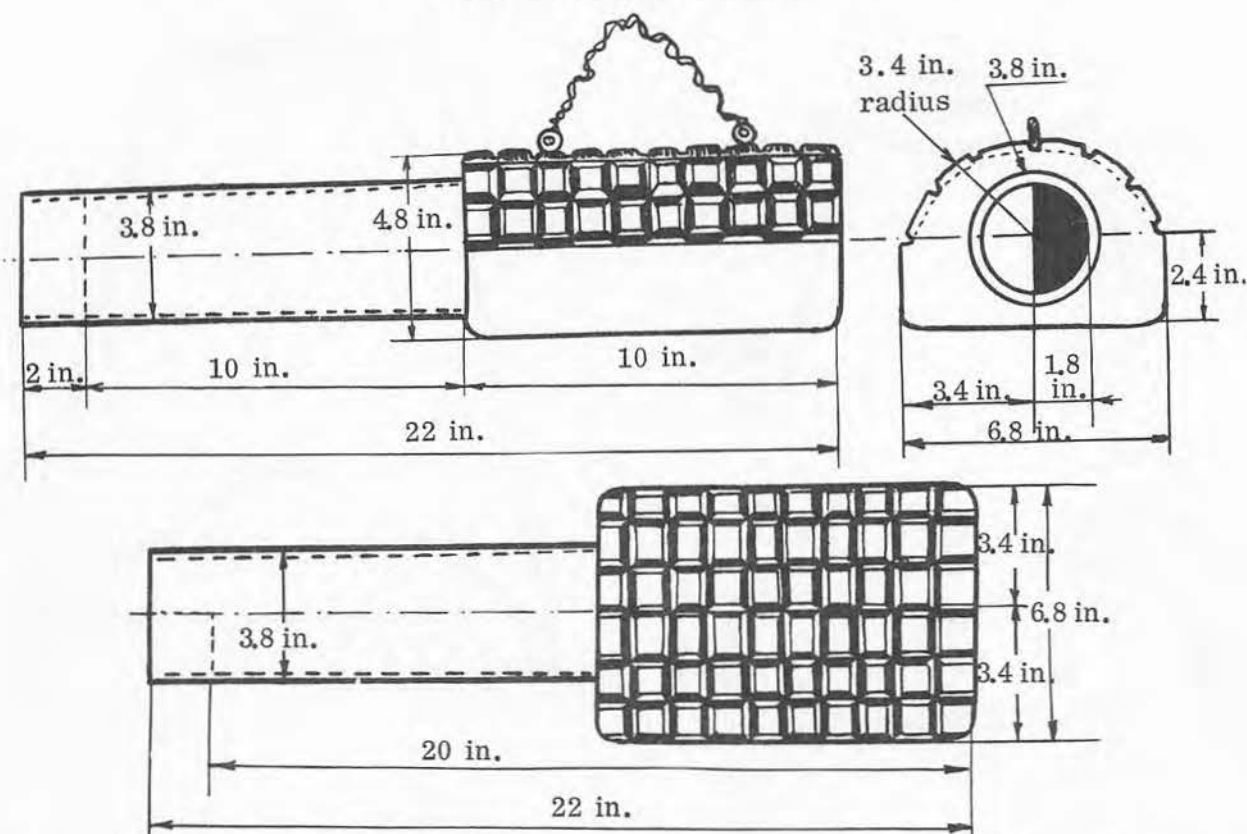


This mine is constructed of sheet metal with a dark painted case. It is a modified grenade equipped with one iron (or tin) lug on its body. Its operation is similar to a homemade grenade. When the safety ring is pulled out, the spring is released and the firing pin strikes the primer and detonates the mine.

Characteristics

Color	Dark grey
Over-all weight	0.860 kg/2 lb
Length	160 mm/6 in.
Diameter	65 mm/2 in.
Thickness and quality of the case	0.5-mm sheet metal

VIET CONG LOCALLY MANUFACTURED CYLINDRICAL FRAGMENTATION MINE

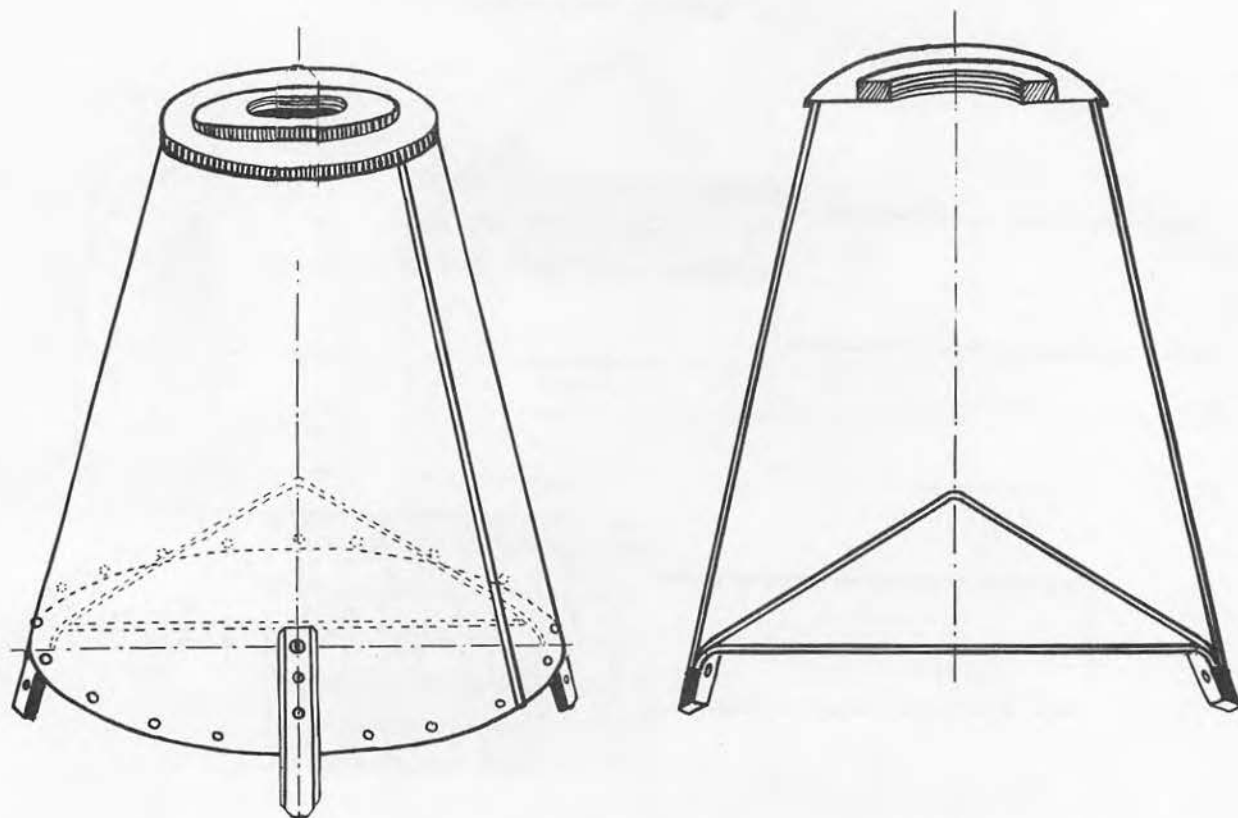


This locally manufactured cylindrical fragmentation mine, with serrations, is constructed of cement; it is electrically fired. There are two iron swivels on the mine body to tie it to an object. On one side of the mine head is a round iron pipe, 95 mm/3.8 in. in diameter, and on the other side is a hole to accommodate the electric blasting cap.

Characteristics

Color	Grey
Over-all weight	6 kg/13 lb
Length of the mine body	250 mm/10 in.
Height	120 mm/5 in.
Explosive	TNT (poor quality)
Mixture of mine body	Cement
Operation	Electric

SHAPED CHARGE



This is a Viet Cong homemade shaped charge mine which has 3 legs to act as a stand off. The explosive charge container is constructed of black sheet metal, rolled and hermetically welded.

Characteristics

Color	Unpainted
Over-all weight	9.500 kg/21 lb
Charge	TNT (poor quality)
Size of igniter well threads	52 mm/2 in.
Charge weight	6.100 kg/13-1/2 lb
Weight of mine body	2.950 kg/6 lb
Height	270 mm/11 in.
Lower diameter	220 mm/9 in.
Upper diameter	120 mm/5 in.
Thickness	1 mm of black sheet metal
Operation	Electric

VIET CONG NONELECTRIC HOMEMADE HOLLOW CONE MINE



This mine is rudimentarily fabricated. It is conically shaped and made of sheet metal held together with rivets. One handle and two supports are attached to the case to provide equilibrium for the mine. It is equipped with two pressure-pull igniting devices that detonate the mine in 9 seconds. These ignition devices are attached to a charge holding hole by five screws.

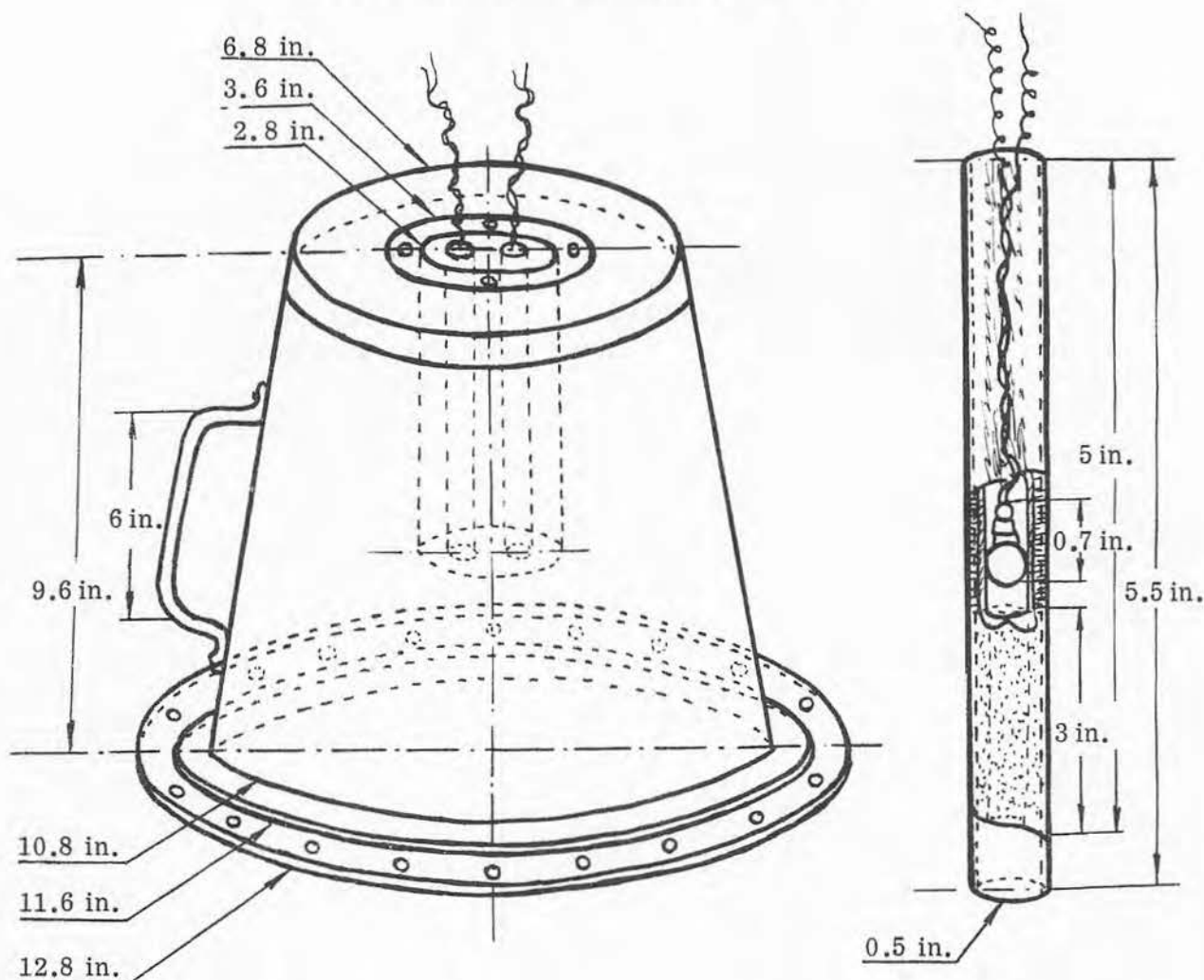
The igniting device is locally made. It consists of a Caltex oil can which contains two detonators, placed in parallel lines in the mine. The components of the mine are two pressure-pull strings, two igniting devices, two igniter charges, and two detonators.

To simultaneously pull two pressure-pull strings in order to ignite both igniting devices, the Viet Cong connect two steel wires, 30-mm long each, to the two pressure-pull strings to add distance.

Characteristics

Over-all length	204 mm/8 in.
Diameter at the largest part	219 mm/9 in.
Diameter at the smallest part	132 mm/5 in.
Diameter of the fuze well	51 mm/2 in.
Length of the handle	102 mm/4 in.
Length of the support	25 mm/1 in.
Over-all weight of the mine	7 kg/15 lb
Weight of the charge	4.100 kg/9 lb
Weight of the mine case	2.900 kg/6 lb

VIET CONG SHORT CONE-SHAPED MINE

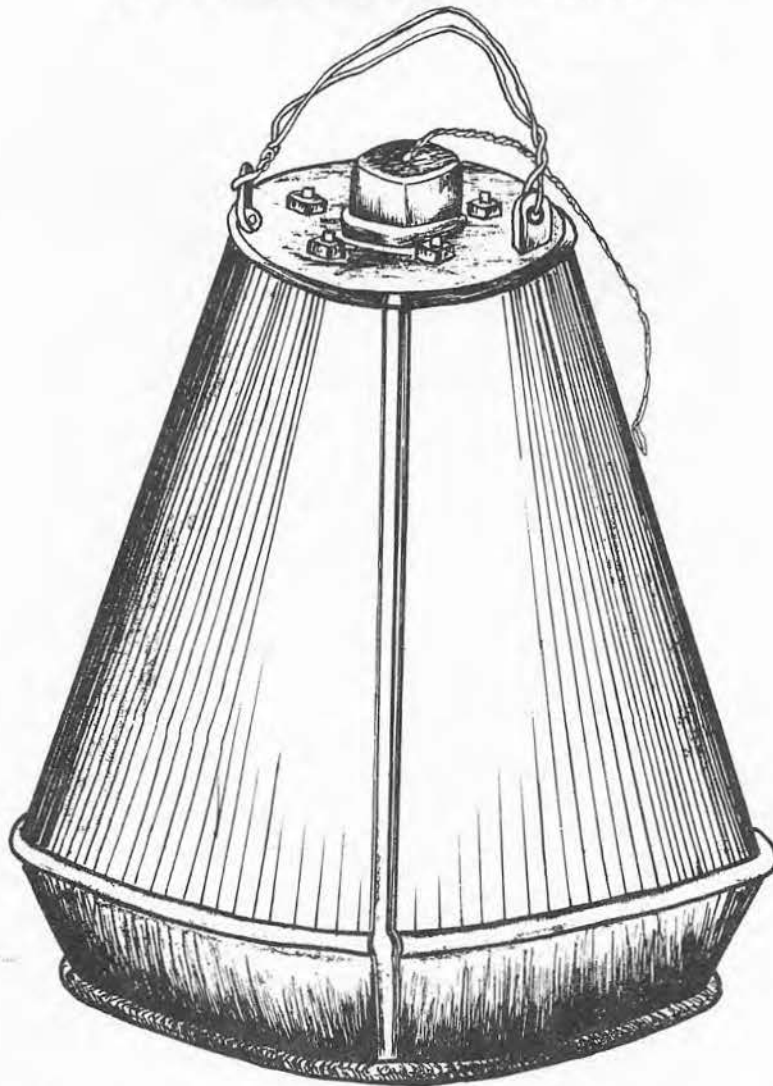


The Viet Cong locally made short cone-shaped mine weighs 12.500 kg/27 lb and contains 7 kg/15 lb of TNT. Its outer case is made of sheet iron. The upper part, 170 mm/7 in. in diameter, has two holes through which two electric blasting caps are introduced (to increase reliability). The mine has a bell-shaped base, 270 mm/11 in. in diameter which has a rim of 320 mm/13 in. in diameter held with a row of rivets. A handle is attached to the side of the mine case by two rivets.

Characteristics

Color	Black
Over-all weight	12.500 kg/27 lb
Height	240 mm/10 in.
Upper diameter	170 mm/7 in.
Base diameter	270 mm/11 in.
Charge	TNT (poor quality)
Weight of charge	7 kg/15 lb
Weight of the mine case	5.500 kg/12 lb
Material of the mine case	Ordinary sheet iron
Markings	Three number 4's painted in red in a triangle on the body of the mine.

VIET CONG HOMEMADE WATER MINE



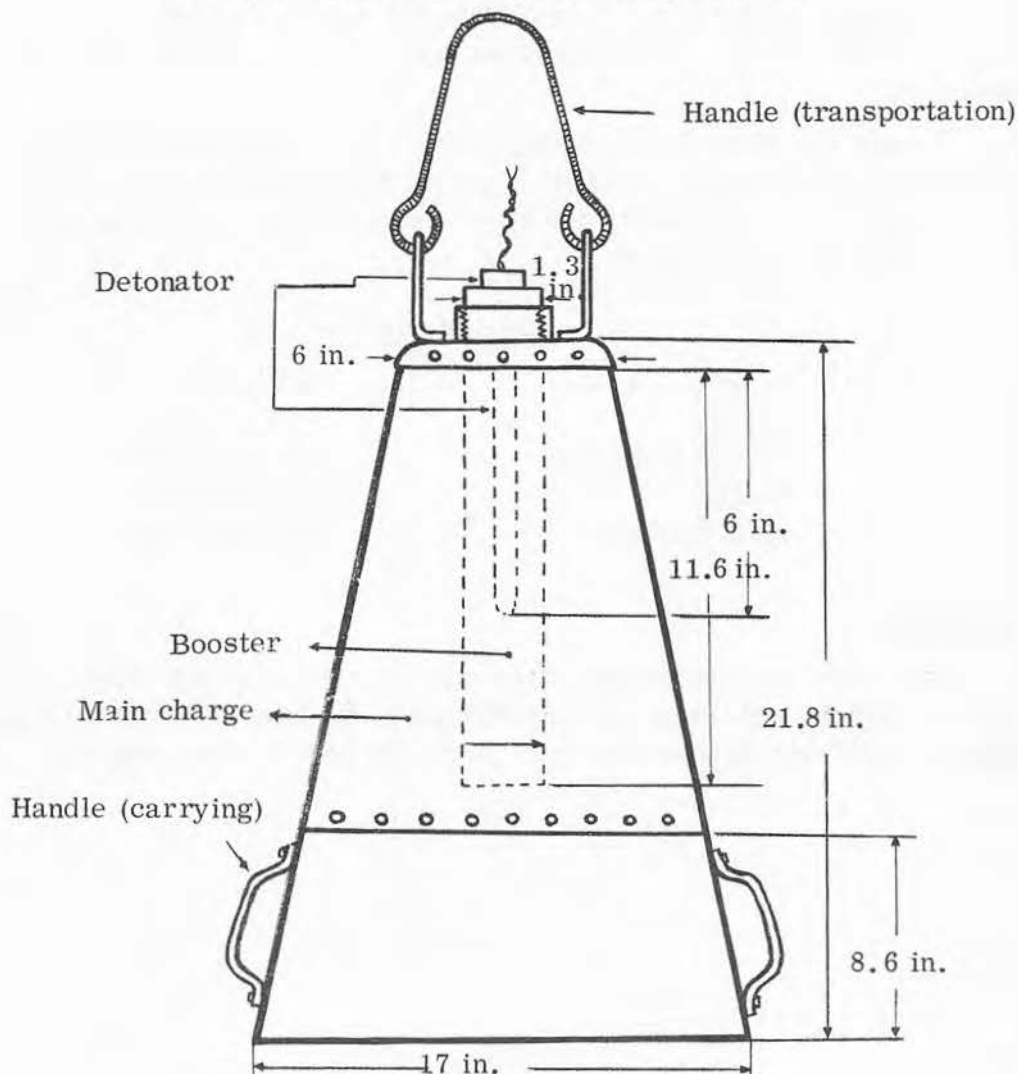
The Viet Cong homemade water mine is constructed in the shape of a short cone and fabricated from sheet metal held together by rivets. The water mine is usually painted black and marked with the number "4" at three different spots on its outer case.

This is a type of standardized-shaped mine utilized by the Viet Cong. It is constructed in different sizes and is operated by electricity. It is employed to attack naval ships and boats.

Characteristics

Weight	12.500 kg/27 lb
Operation	Electricity
Height	291 mm/12 in.
Base diameter	275 mm/11 in.
Head diameter	173 mm/7 in.
Charge	TNT
Weight of charge	7 kg/15 lb

VIET CONG LOCALLY MADE WATER MINE



The Viet Cong locally made water mine is made of sheet iron rolled into a short conical shape and fastened with rivets.

This water mine is composed of two parts: the upper and the lower parts, which are separated by a piece of sheet metal held together with inner and outer rivets. They serve different purposes and have the following characteristics:

Upper Part: This contains the firing device and main charge composed of:

- (1) Electric primer
- (2) Detonator
- (3) Igniter
- (4) Charge

Lower Part: This is a hollow case designed to stabilize the water mine and keep it buoyant underwater. To stabilize the water mine underwater, the Viet Cong attach steel bars or wooden poles around the two handles attached to the outer side.

To prevent water from leaking into the water mine and damaging the firing device and the explosives, asphalt is put on the primer housing and around the rivets. However, when mines are recovered and the two parts are disassembled, they are always full of water.

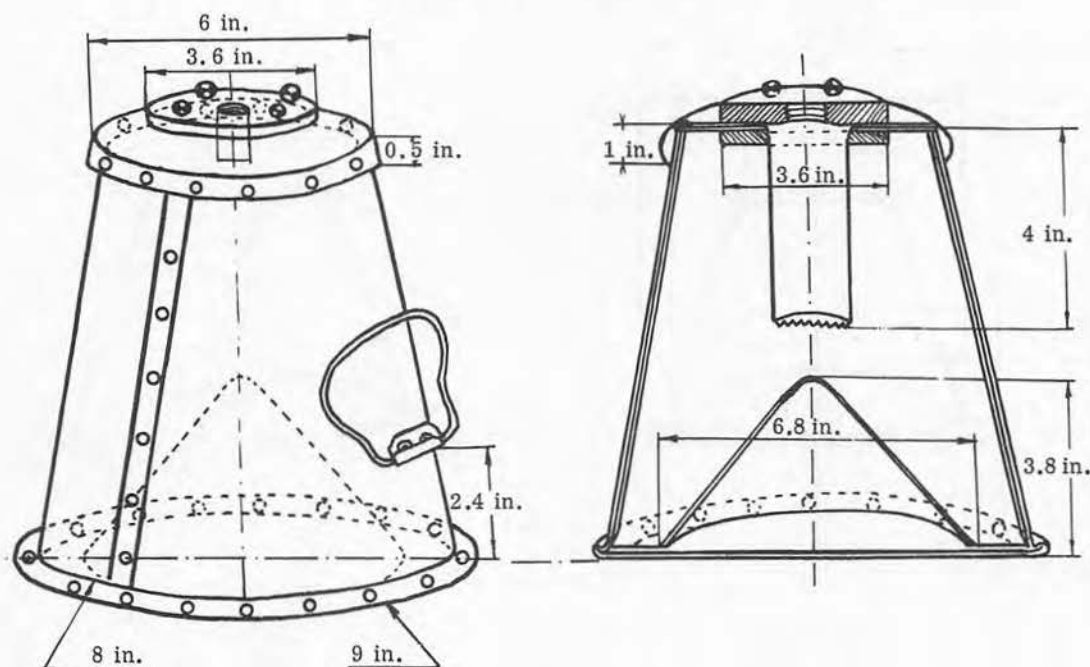
Characteristics

Weight	36 kg/80 lb
Charge	19 kg/41 lb
Bottom diameter	435 mm/17 in.
Height	545 mm/22 in
Head diameter	152 mm/6 in.

REMARKS:

The Viet Cong homemade water mine is used to attack ships, but it is very possible that the Viet Cong will camouflage it and float it downstream to destroy bridges. Although homemade, the water mine is very destructive.

VIET CONG LOCALLY CONSTRUCTED SHAPED CHARGE

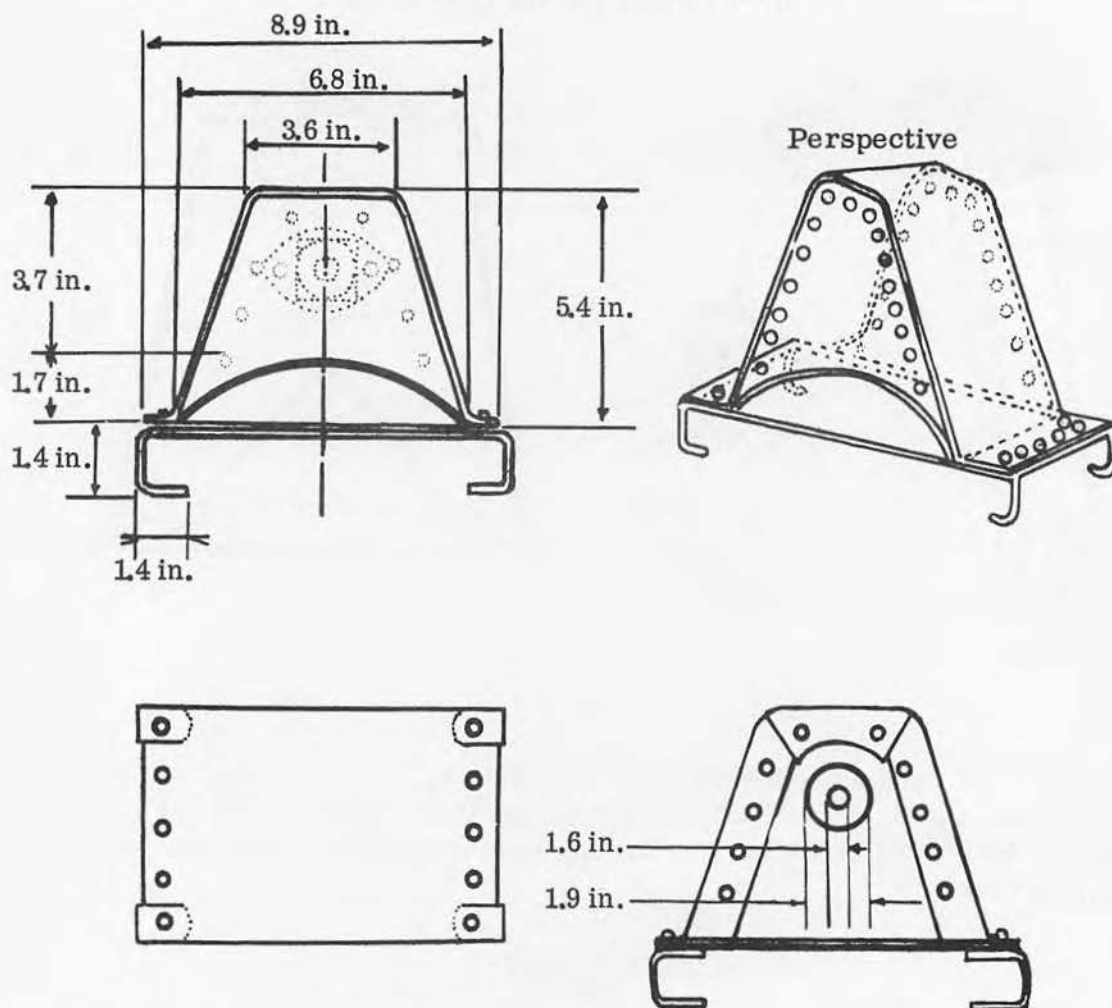


This short pyramidal shaped charge functions by electricity and is constructed of rolled black sheet metal which is fastened together by rivets. There is a handle attached to the bottom of the mine. The top and bottom of the mine are fastened together by rivets.

Characteristics

Color	Black
Over-all weight	8 kg/17-1/2 lb
Diameter	144 mm/6 in.
Length	214 mm/8-1/2 in.
Explosive charge	Melinite
Size of fuze groove	2.5 mm
Weight of explosive charge	4.915 kg/11 lb
Weight of charge body	3.085 kg/6-1/2 lb
Thickness and material of mine body	Bottom of mine, 1-mm thick; mine body and top, 2-mm thick; black sheet metal
Markings on the mine	Fuze well painted red; at the edge of the mine are two figure 9's opposite one another.

VIET CONG LOCALLY MANUFACTURED "TURTLE" MINE
CONSTRUCTED OF SHEET METAL

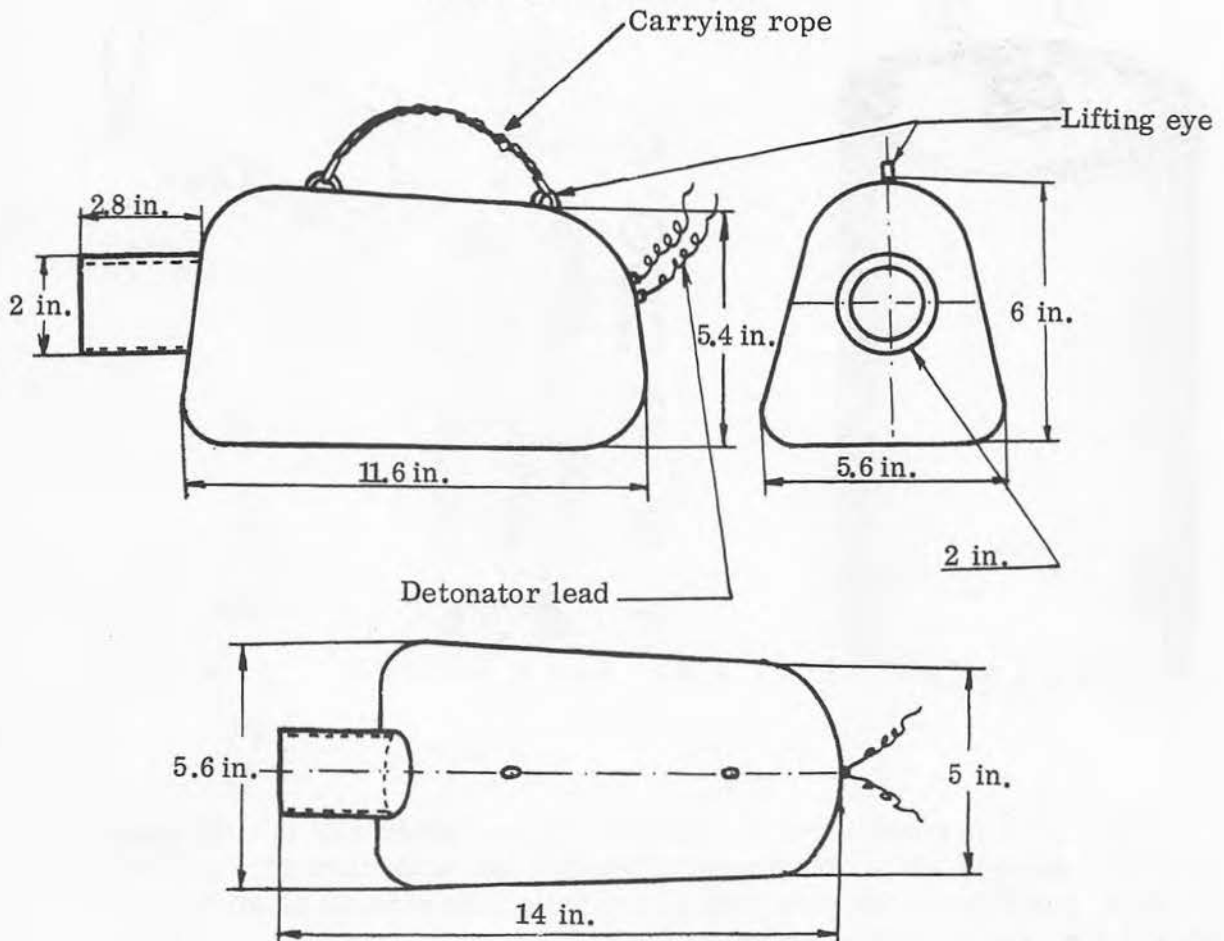


This mine is constructed of separate pieces of black sheet metal put together with rivets. There are four U-shaped supports placed across the bottom of the mine.

Characteristics

Color	Black
Over-all weight	9.300 kg/20 lb
Explosive charge	Melinite
Weight of explosive charge	3.530 kg/7-1/2 lb
Weight of mine body	5.770 kg/12-1/2 lb
Height	134 mm/5-1/2 lb
Groove of the fuze hole	11.5 mm/1/2 in.

VIET CONG LONG AND ROUND MOUND SHAPED LOCALLY
MANUFACTURED MINE

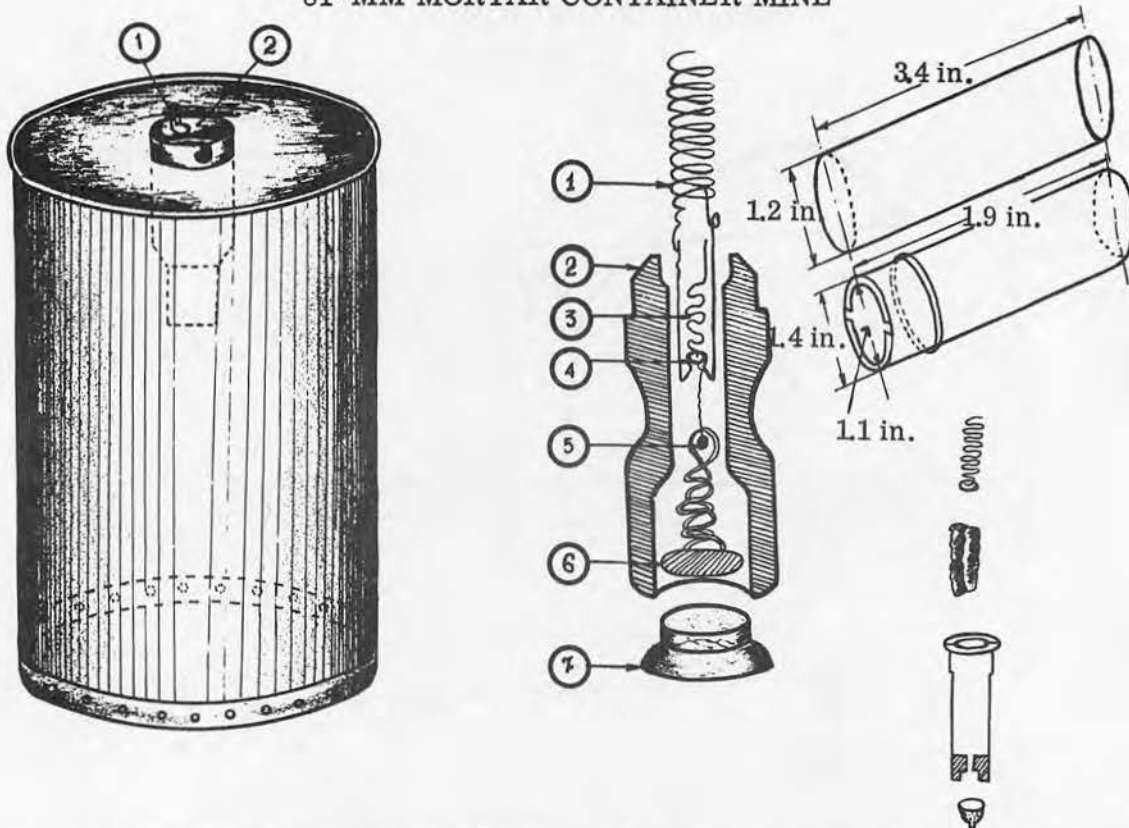


This mine is constructed of cement and electrically operated. There are two iron swivels on the mine body to tie it to an object. One side of the head has a round iron pipe, 50 mm/2 in. in diameter, and the opposite side has a hole to accommodate an electric blasting cap.

Characteristics

Color	Grey
Over-all weight	6 kg/13 lb
Length	290 mm/12 in
Height	150 mm/6 in.
Diameter	140 mm/5-3/4 in.
Explosive charge	TNT (poor quality)
Operation	Electric

81-MM MORTAR CONTAINER MINE



This mine is constructed of a mortar shell container with the cap intact and the bottom plugged with a round piece of wood of the same diameter, 18 mm/5/8 in. thick, and fixed to the mine body by two nails. An electric blasting cap or friction fuze can be utilized with this mine.

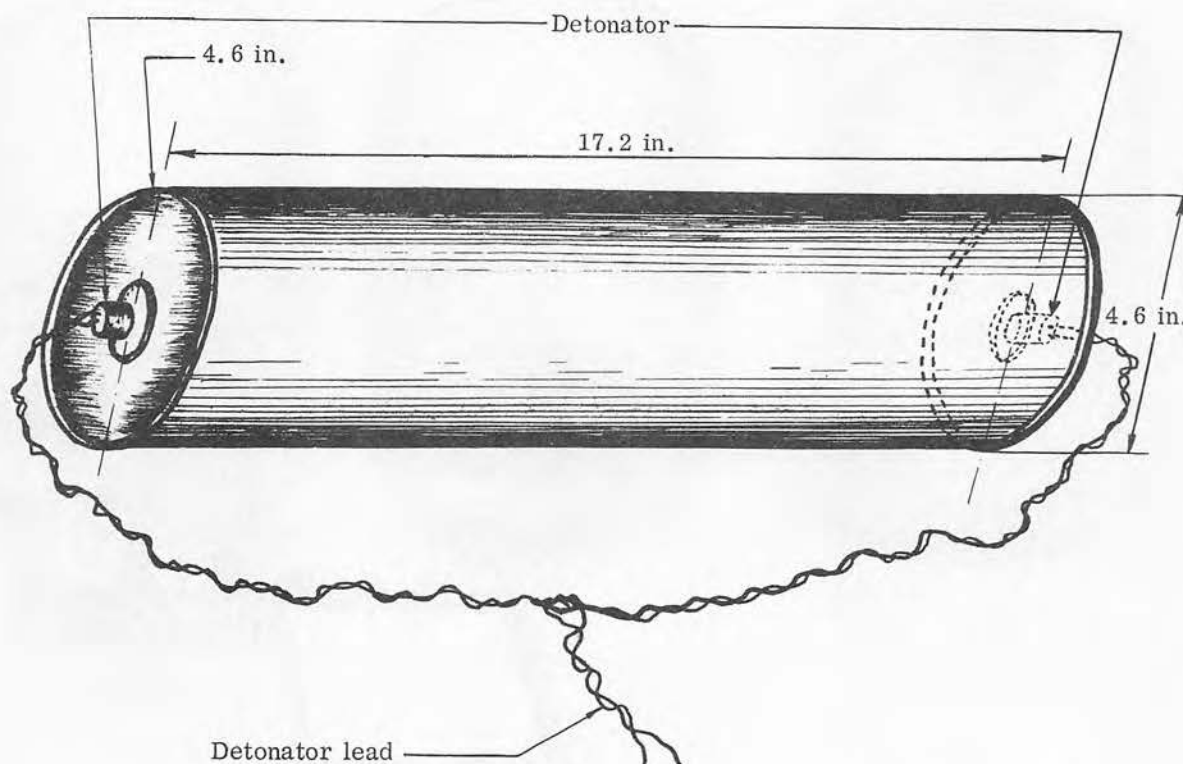
Mine Body:

- (1) Fuze hole
- (2) Fuze blocking plates

Fuze:

- (1) Spring
- (2) Two iron latches to attach the fuze to the mine opening
- (3) Brass friction wire to ignite the black powder
- (4) Brass pipe which houses the friction wire
- (5) Swivel in the end of the friction wire through which a hemp rope is passed for leverage
- (6) Sealing washer
- (7) Wooden sealing plug with wax substance on the outside to keep the contents dry.

VIET CONG LOCALLY CONSTRUCTED ROUND VOLUME MINE

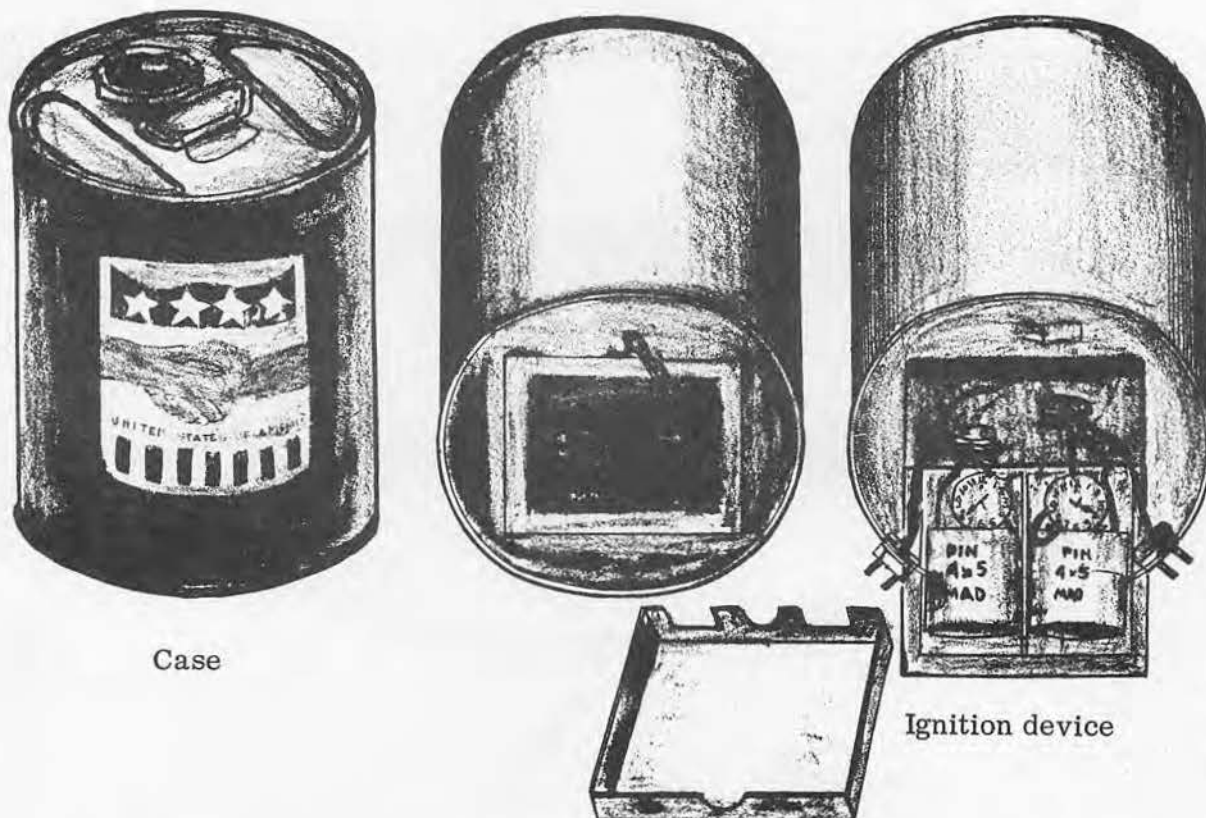


This locally manufactured mine is constructed of sheet metal and is fired electrically. There are two primer detonators located in the head of the mine.

Characteristics

Color	Dark green
Length	430 mm/17 in.
Diameter	115 mm/5 in.
Operation	Electric
Over-all weight	7 kg/15 lb
Weight of explosive charge	6 kg/13 lb
Type of explosive charge	Melinite (poor quality)
Thickness and mixture of mine case	1/2 mm sheet metal
Marks on the mine body	Red painting P ÷ X 6 K 313, Type II.

HOMEMADE MINE DELAY FIRING DEVICE



This is a homemade type mine which functions by electricity and is exploded by a time delay firing device. The fabrication is as follows:

Case: The explosive is placed in a US 5-gallon can, whose top remains the same with cover and handle. A rectangular hole (size 13.5 x 15 cm) is cut in the bottom with a hinged cover under which a firing device is placed.

Ignition device: The ignition device is composed of two batteries (MAZDA make or similar 4.5-volt type) and two watches (1 each CAFOR and CYTAS or similar watches).

Both watches have three hands; the minute and second hands have been cut short. A small hole is bored through the crystal at the "12" on each watch dial. A copper screw is placed in the drilled hole and a wire is connected between the battery anode (+) and the screw. Another wire leads from the watch case to the battery cathode (-) and to a jack.

Explosive: The can contains 20 kg (45 lb) of explosives. Two holes have been bored on the center plate and two wires from the explosive go through these holes and connect to two outer plugs. Time setting is then adjusted in order to explode the mine at a prescribed time. At the prescribed time, the hour hand touches the copper screw at the "12". Electricity from the battery will flash to the ignition device and the explosive will detonate.

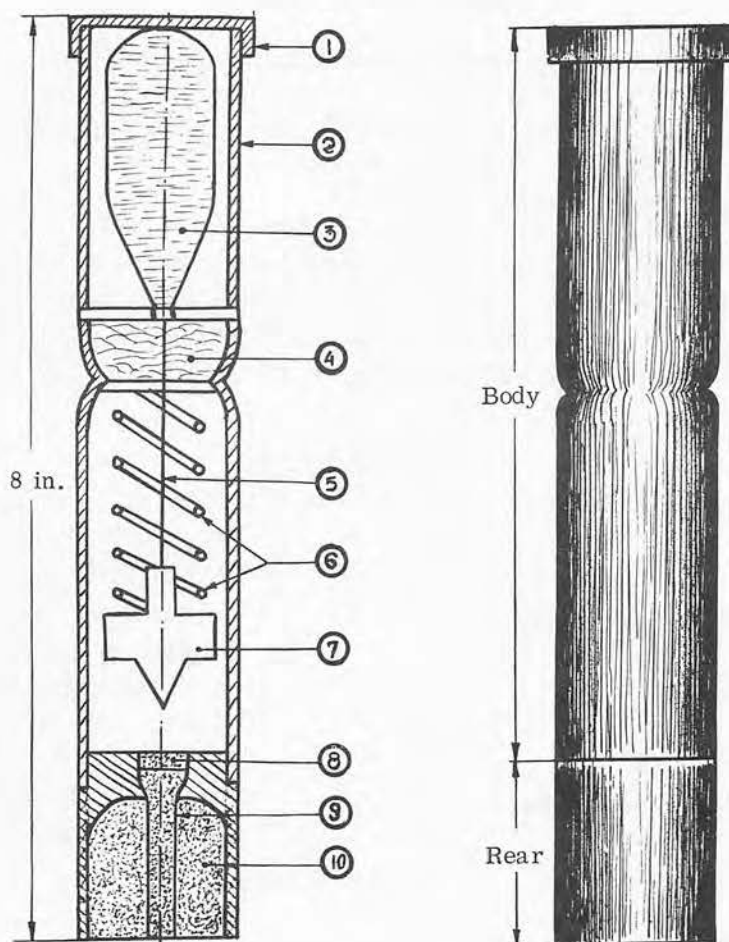
ATTENTION:

This mine only requires one watch and one battery to function. But here, the Viet Cong used a double system (two watches and two batteries) with no other purpose than to make the mine more reliable. (In case one watch in out of order, the other continues to operate.)



DEMOLITION MATERIAL

CHEMICAL FIRING DEVICE



This firing device is employed by the Viet Cong for sabotage purposes. It is attached to mines and TNT demolition blocks. Its delay is between 20 and 38 minutes and the reaction is by chemical solution, copper sulfate (CuSO_4).

The firing device is constructed of the following components:

- (1) Cap
- (2) Fuze body (contains the solution, end cap spring, and firing pin release wire made of copper or iron)
- (3) Copper sulfate solution container (made of glass)
- (4) End cap (constructed of copper and contains cotton)
- (5) Iron wire
- (6) 1-mm firing pin spring
- (7) Iron firing pin

- (8) Primer
- (9) Fuze
- (10) Tetryl charge

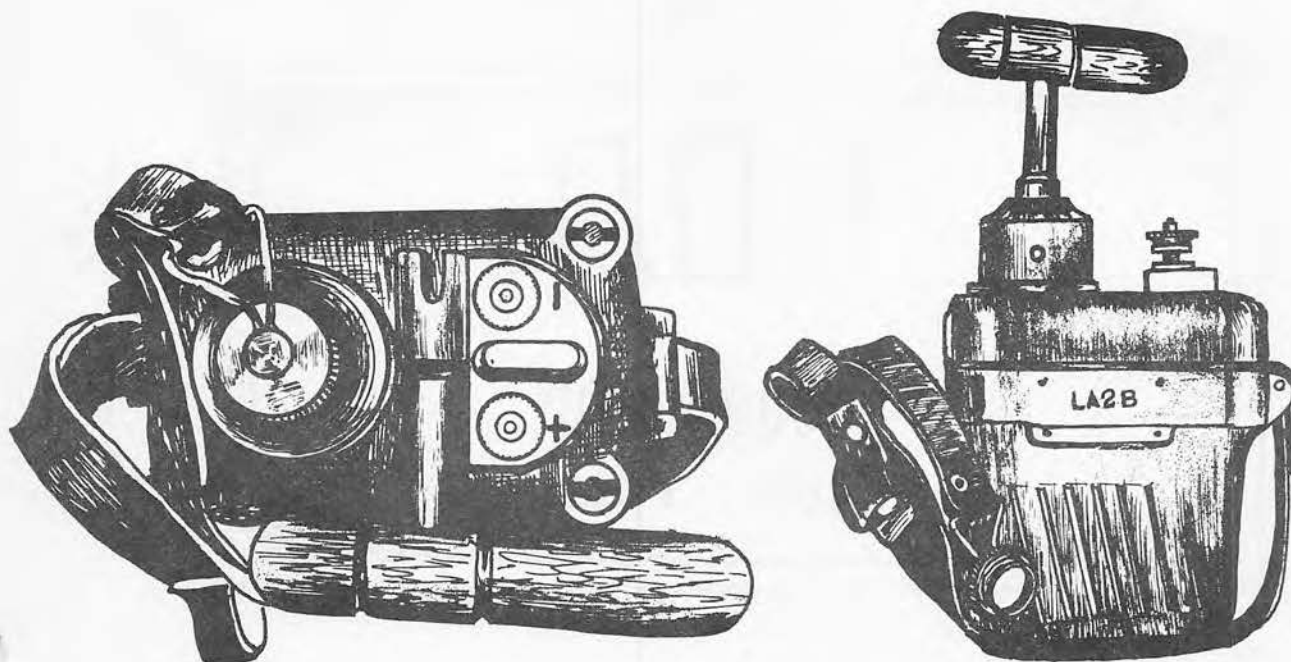
When the solution tube is broken, the solution runs down to the cotton container, soaks the release wire, and causes a chemical reaction. This reaction goes to a fixed degree until the release wire is eroded through, then the spring forces the firing pin against the primer.

With a 15% CuSO_4 solution (copper sulfate + blue alum + 2 or 3 drops of hydrochloric acid), the 3/10 mm release wire possibly can be eroded away and detonate the device within 28 to 38 minutes. With a 10% CuSO_4 solution (copper sulfate + blue alum + 2 or 3 drops of hydrochloric acid), the 3/10 mm release wire will be eroded away and detonate the device within 20 to 30 minutes.

Characteristics

Firing pin release wire	3 mm/0.12 in. thick 120 mm/5 in. long 12 mm/0.48 in. wide
Solution container	25 mm/1 in. long 9 mm/0.4 in. wide
End cap	13 mm/0.5 in. long 12 mm/0.48 in. wide
Iron wire	3/10 mm to 5/10 mm
Firing pin spring	7 mm/0.3 in. wide 13 mm/0.5 in. long

CHINESE COMMUNIST LA2B BLASTING MACHINE



The Chinese Communist LA2B blasting machine is used to detonate all types of electrical blasting caps.

It can detonate 10 blasting caps simultaneously.

Characteristics

Case	Metal
Height	170 mm/7 in.
Width	140 mm/5-1/2 in.
Weight	2.650 kg/5-1/2 lb

RUSSIAN TNT DEMOLITION BLOCK



The Russian TNT demolition block is rectangular shaped and has a 6 mm/ 1/4 in. diameter hole in the end of the block. It is covered with wax paper which has an inscription in Russian as to the contents. This demolition block is used as a booster block for all demolition work.

Characteristics

Weight	0.400 kg or 3/4 lb
Size	50 × 50 × 100 mm/2 × 2 × 4 in.

CHINESE COMMUNIST TNT DEMOLITION BLOCK



The Chinese Communist TNT demolition block is rectangular in shape, yellowish in color, wrapped in oil paper with Chinese markings on the outside meaning: TNT Demolition Block, 200 grams.

A number of demolition blocks of this type are assembled by the Viet Cong into a satchel charge, which weighs 5, 10, 15 or 20 kg, and affixed to the ends of a bamboo pole, 4 to 5 m long.

Characteristics

Color	Yellow
Height	50 mm/2 in.
Length	100 mm/4 in.
Width	25 mm/1 in.
Weight	200 g/1/2 lb
Marking	Yellow label with black printed (ChiCom) characters
Flammable temperature	From 81° to 82.6° C
Explosion temperature	175° C
Detonation velocity	6900 mps/22, 637 fps

CHINESE COMMUNIST RED PHOSPHORUS



Red phosphorus, manufactured by the Chinese Communist is a powder-type product of slight sensitivity. The temperature required to burn in the air is 260° C. At normal temperature, this substance when mixed with potassium chlorate or potassium nitrate increases the sensitivity.

The mixture of red phosphorus and potassium chlorate or potassium nitrate is used as the explosive filler in mines, grenades, flying bombs, and mortar and artillery shells. This mixture will provide a thick screen of smoke and a mild explosive effect.

Characteristics

Case	Sheet metal
Color	Grey
Dimension	230 × 150 × 150 mm/ 9 × 6 × 6 in.
Over-all weight	5 kg / 11 lb
Markings	Label "Red Horse" in English and Chinese characters

